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CITY OF ABERDEEN

REPORT

BY THE

MEDICAL OFFICER OF HEALTH

MATTHEW HAY, M.D., LL.D.

FOR THE YEAR

1914

TOGETHER WITH

ABBREVIATED REPORTS

FOR THE YEAR

1915

BY THE

MEDICAL OFFICER OF HEALTH AND THE SANITARY INSPECTOR.

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The Report for 1914, although belated in preparation, has been in type for some time, but it was thought advisable to delay its issue until it could be accompanied by the Report for 1915, which, in accordance with the suggestion of the Local Government Board to all Health Officers, has been considerably abbreviated. The joint publication of the two Reports enables the statistics for 1915 to be compared conveniently with those for 1914 and with the figures given in several tables of that Report for a long series of earlier years.—M.H.

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CITY OF ABERDEEN.

REPORT BY THE MEDICAL OFFICER OF HEALTH

For the Year 1914.

POPULATION.

(Table I.)

The estimated population of the City, at the middle of the year, was 164,351. The estimate is based on the census population for 1911; and the subsequent increase or decline is calculated from any change in the number of occupied houses since that year, the number of such houses being obtainable from the Assessor's Roll.

The population, as estimated, includes the staff and inmates of Kingseat Asylum and Oldmill Poorhouse in so far as resident within these institutions. These institutions, although outside the City boundary, belong exclusively to the Parish Council of the City, and are occupied by persons from the City. The population as given in the reports of the Registrar-General does not take account of these institutions; but it is reasonable to include them in the estimate of the population, as practically all the deaths and births within them are included, both in this Report and in the Registrar-General's reports, in the vital statistics of the City.

The estimated population for 1914 shows an increase of 1,802 as compared with the population for the preceding year. In each of the preceding two years a decrease had to be recorded. The population in 1914 is still, however, under the census population of 1911, which was 165,426, inclusive of the institutions referred to.

The accompanying table gives the percentage and number of the population at each of the principal age-periods.

TABLE I.—ABERDEEN.—POPULATION AT VARIOUS AGE-PERIODS—1914.

(As estimated from proportions at Census of 1911.)

		Under 1 year.	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 years and upwards.	ALL AGES.
Percentage of Population at each Age (according to Census) .	1901	2·71	9·72	21·61	20·58	26·35	14·20	4·83	...
	1911	2·23	9·03	22·13	19·13	26·84	15·31	5·33	...
Estimated Population at each Age-Period in 1914 . . .		3,665	14,841	36,371	31,440	44,112	25,162	8,760	**164,351**

BIRTHS.

(Table II.)

The annual number of births, as stated in Table II., has been corrected for the year 1911 and all subsequent years by in-transfers of all births outside the City occurring among women whose usual place of residence was inside the City, and by out-transfers of births among women within the City whose usual place of residence was outside the City. It is not unusual for the prospective mothers of illegitimate children to come into the City for the purpose of being confined. In a few cases, the inducement is the provision offered by the Maternity Institution. On the other hand, since the removal of the City Poorhouse outside the City boundaries, the births taking place within the Poorhouse fall naturally to be added to the births in the City, as the mothers belong to the City. These latter births have been always added to the number stated in the successive annual reports since the removal of the Poorhouse, but corrections have not been made until now for such births occurring elsewhere outside the City boundary, or for the births occurring in the City among mothers not ordinarily resident there. These transfers are now being undertaken by the Registrar-General, and it is possible from his reports to obtain the corrected numbers.

Thus estimated, the total number of births during the year was 4,006, equivalent to a rate of 24·6 per 1,000 of the population. In the preceding year (1913), the births amounted to 3,852, and were at the rate of 23·9 per 1,000 of population. In 1912, the births were 4,145, with a rate of 25·4.

The number of births in the City Poorhouse during 1914 was 15.

It is satisfactory to find that the birth-rate shows an increase as compared with that for the preceding year, which was the lowest on record since civil registration began in 1855. The birth-rate, however, is still scarcely more than two-thirds of the rate in the earlier years of registration.

Proportion of Males to Females.—The number of male infants to every 100 female infants born during each of the past eight years was as follows:—

Year.	Males to 100 Females.	Year.	Males to 100 Females.
1907,	113	1911,	102
1908,	104	1912,	97
1909,	102	1913,	108
1910,	101	1914,	105

Illegitimate Births.—The number of illegitimate births, after correction for transfers, was 377, and amounted to 9·4 per cent. of the total births, and is lower than in any year since 1908. In 1913, the percentage was 10·6. The average for the ten years preceding 1914 was 9·8.

Births in Proportion to Women of Child-bearing Ages (15-45 *years).*—The ordinary method of stating the birth-rate in proportion to the total population does

Table II.—Aberdeen.—Marriage, Birth, and Death-Rates—1856 to 1914.

Per 1,000 of population.

Year.	Population.	Marriages.		Births.			Deaths.†			Excess of Birth-Rate over Death Rate.
		Number.	Rate per 1,000 of Population.	Number.	Rate per 1,000 of Population.	Illegit. Births per 100 Total Births.	Number.	Rate per 1,000 of Population.	Average Age at Death.	
1914	**164,351**	**1,536**	**9·3**	**4,006**	**24·6**	**9·4**	**2,752**	**16·7**	**39·5**	**7·9**
1913	162,549	1,348	8·3	3,852	23·9	10·6	2,859	17·6	36·7	6·3
1912	164,536	1,350	8·2	4,145	25·4	10·4	2,564	15·6	40·5	9·8
1911	165,426	1,335	8·1	4,009	24·5	10·4	2,512	15·2	37·7	9·3
1910	164,800	1,325	8·0	4,319	26·2	9·5	2,339	14·2	40·8	12·0
1909	164,100	1,347	8·2	4,518	27·5	9·6	2,675	16·3	36·2	11·2
Mean of 1909-1913	**164,282**	**1,341**	**8·2**	**4,169***	**25·5**	**10·1**	**2,590**	**15·8**	**38·4**	**9·7**
1908	163,600	1,297	7·9	4,472	27·3	9·1	2,582	15·8	37·4	11·5
1907	163,100	1,473	9·0	4,502	27·6	10·2	2,474	15·2	37·8	12·4
1906	162,500	1,358	8·4	4.712	29·0	10·0	2,491	15·3	35·9	13·7
1905	161,500	1,374	8·5	4,892	30·3	9·2	2,618	16·2	36·5	14·1
1904	160.100	1,505	9·4	4,885	30·5	8·5	2,826	17·7	33·6	12·8
Mean of 1904-1908	**162,160**	**1,401**	**8·6**	**4,693**	**28·9**	**9·4**	**2,598**	**16·0**	**36·2**	**12·9**
1901-1905	**158,082**	**1,428**	**9·0**	**4,872**	**30·8**	**8·5**	**2,763**	**17·5**	**34·9**	**13·3**
1896-1900	**145,740**	**1,356**	**9·3**	**4,636**	**31·8**	**8·3**	**2,644**	**18·1**	**33·3**	**13·7**
1891-1895	**131,627**	**1,099**	**8·4**	**4,114**	**31·3**	**9·8**	**2,539**	**19·3**	**32·9**	**12·0**
1886-1890	**117,537**	**911**	**7·8**	**3,827**	**32·5**	**10·4**	**2,370**	**20·2**	...	**12·3**
1881-1885	**108,959**	**848**	**7·8**	**3,712**	**34·1**	**10·6**	**2,159**	**19·8**	...	**14·3**
1876-1880	**100,419**	**788**	**7·9**	**3,480**	**34·7**	**10·9**	**2,100**	**20·9**	...	**13·8**
1871-1875	**91,941**	**705**	**7·7**	**3,169**	**34·5**	**12·1**	**2,063**	**22·4**	...	**12·1**
1866-1870	**84,234**	**684**	**8·1**	**3,010**	**35·7**	**12·9**	**1,978**	**23·5**	...	**12·2**
1861-1865	**77,040**	**624**	**8·1**	**2,663**	**34·6**	...	**1,915**	**24·9**	...	**9·7**
1856-1860	**73,458**	**524**	**7·1**	**2,397**	**32·6**	..	**1,772**	**24·1**	...	**8·5**

* Corrected for transferred births for 1911 and subsequent years.

† Corrected for transferred deaths for 1904 and subsequent years.

not afford so accurate a measure of the fertility of the population as when the births are compared with the number of women of fertile ages in the population. The fertile period is usually assumed to extend from the age of 15 to the age of 45.

Thus estimated, the number of births among married women in 1914 amounted to 210 per 1,000 of such women at the ages specified. In the preceding year, the rate was 202.

Similarly stated, the birth-rate among unmarried and widowed women of the fertile ages was 15·6 per 1,000. In the preceding year, it was 17·1.

Thus, roughly, about 1 in every 5 married women, and 1 in every 64 unmarried women, of the fertile ages, gave birth to a child during the year.

Still-Births.—Information regarding still-births is obtained under the Notification of Births Acts. A still-born child, as defined in the Acts, is a child born dead after the seventh month of pregnancy. A few still-births are, however, notified of infants born between the sixth and seventh months. From inquiries made by the Health Visitors, the number of such early still-births, in so far as they are notified, would not appear to exceed about 10 or 12 in a year.

The total number of still-births notified in 1914 was 150, or 37 per 1,000 births. In 1913, the number was 160, or 41 per 1,000 births; in 1912, it was 178, or 43 per 1,000; and in 1911, it was 201, or 48 per 1,000.

From these figures it would appear that either the still-births are becoming considerably less numerous, or a growing proportion of them is escaping notification. I have stated in previous reports that there is reason to believe that a certain proportion, which I estimated in the first two years of notification to amount to about 8 to 10 per cent., was escaping notification, but it is possible that the proportion is increasing, the more that there is no check on the notification of still-births, such as is available for live-births, from the records of the registrars. Still-births, as is well known, are not registrable.

In order to check the figures relating to still-births, I have made inquiry at the various cemeteries and churchyards as to the number of still-born children buried in each during the past five years, and have asked the superintendents to omit any still-born children brought from outside the City. The total number of such burials was in the year 1911, 172; in the year 1912, 179; in the year 1913, 156; and in the year 1914, 142. There has obviously been a considerable decline in the number of such burials during the last two years, the decline corresponding fairly closely with the decline in the number of notified still-births during these years. We may, therefore, assume that there has been a real diminution of these births.

MARRIAGES.

(Tables II. and II.(A.))

During the year 1914, there were 1,536 marriages within the City, equivalent to a rate of 9·3 per 1,000 of population. In the preceding year, there were 1,348 marriages, with a rate of 8·3, and in 1912 there were 1,350 marriages, with a rate of 8·2.

TABLE II. (A).—ABERDEEN.—MARRIAGES IN YEARS 1910-14.

	YEAR.				
	1914.	1913.	1912.	1911.	1910.
A.—MEN.					
Status :—					
BACHELORS,	**1399**	1221	1225	1220	1199
WIDOWERS,	**137**	127	125	115	126
ALL,	**1536**	1348	1350	1335	1325
Occupation :—					
Labouring and Artisan,	**1158**	981	1023	929	929
Commercial,	**292**	283	241	296	285
Professional,	**79**	78	83	106	109
Other or No Occupation,	**7**	6	3	4	2
Residence :—					
In Aberdeen.	**1137**	957	953	952	949
Not in Aberdeen,	**399**	391	397	383	376
B.—WOMEN.					
Status :—					
SPINSTERS,	**1451**	1280	1296	1284	1262
WIDOWS,	**85**	68	54	51	63
ALL,	**1536**	1348	1350	1335	1325
Occupation :—					
Domestic Servants,	**370**	334	335	331	355
Dressmakers and Milliners,	**83**	93	90	86	72
Workers in other Workshops and in Factories,	**567**	486	474	461	422
Saleswomen (incl. Dealers),	**107**	90	89	110	95
Clerks and Typists,	**61**	41	51	50	40
Teachers and Nurses,	**60**	63	77	60	55
Other Occupation,	**14**	12	10	15	20
No stated Occupation,	**274**	229	224	222	266
Residence :—					
In Aberdeen,	**1255**	1070	1080	1061	1063
Not in Aberdeen,	**281**	278	270	274	262

The marriage-rate in 1914 was the highest rate in any year since 1904, when it was 9·4. The rate had been slowly rising between 1910 and 1913, but rose sharply in 1914. The rise was in considerable part due to an increased number of marriages after the commencement of the War, as is evident from the following figures, but it is also equally apparent that there had been a considerable increase in the months previous to the War:—

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913	113	64	88	111	49	188	161	103	120	82	80	189
1914	139	74	110	127	47	204	157	133	115	99	124	207

I have compiled from the entries of the Registrars the following information in regard to the marriages during the year. On account of restricted clerical assistance during the year, I have omitted in Table II.(A) the classification of persons according to ages, as given in the report for each of the preceding four years. The grouping according to sex, status, occupation, and residence is, however, retained, and the results are compared with these for the four preceding years.

Residence.—In 1914, 1,137 of the males married were ordinarily resident in Aberdeen, the remaining 399 coming from outside the City. In 1913, the corresponding numbers were 957 and 391.

As regards the females, 1,255 were ordinarily resident in the City, and 281 lived outside the City, the numbers for the preceding year being 1,070 and 278.

The increase of marriages in 1914 was, therefore, both for males and for females, confined practically to residents in the City.

Irregular Marriages.—The number of irregular marriages was 294. In the preceding four years beginning with 1910, it was 129, 105, 100, and 133, respectively. It is evident that there was an exceptionally large increase in 1914—due mainly to the War.

Status.—In the 1,536 marriages, the persons married included 137 widowers and 85 widows. In the preceding year, the widowers amounted to 127 and the widows to 68.

Widows showed proportionately a much larger increase than widowers or than spinsters.

Occupations of Men.—Of the total marriages, 1,158 were of men belonging to the labouring and artisan classes, as against 981 in the preceding year. In the commercial classes there were 292 marriages, as against 283; and in the professional classes, 79, as against 78.

The increase of marriages during the year has, therefore, been almost entirely confined to males of the labouring and artisan classes.

All marriages during the year of men belonging to the Army and Navy have, in the table, been classified according to their normal occupation, if they belonged to the Territorial Forces or had joined the Army or Navy for the present War. The total number of Army men, regardless of such classification, who got married during 1914 was 100, and of Naval men, 12.

Occupations of Women.—As usual, the class of women among whom the greatest number of marriages took place was that of workers employed in workshops and factories, and it was among these workers that the greater part of the increase in marriages during the year occurred. Including 83 dressmakers and milliners, this class of workers provided 650 marriages, as against 579 in the preceding year. The next largest group was that of domestic servants, with 370 marriages, as compared with 334 in the preceding year. The third group was that of women without stated occupation. In this group there were 274, as against 229 for the preceding year. Next came saleswomen (including dealers), with 107 marriages, as compared with 90 in the preceding year. The marriages of teachers and nurses showed a slight decline, and amounted to 60, as against 63 in the preceding year and 77 in 1912. The marriages of clerks and typists, however, showed a distinct increase, the number for the year being 61, as against 41 in 1913.

All groups of women, therefore, showed an increase in the number of marriages, except the group of teachers and nurses.

DEATHS.

(Table II.)

The total number of deaths during the year was 2,752, equivalent to a death-rate of 16·7 per 1,000 of the population. In the preceding year, the deaths amounted to 2,859, giving a rate of 17·6.

These rates have been obtained after adjustment for the transfers, between this and other districts, of deaths of persons occurring in districts outside their usual place of residence. In Table II., and in practically all the tables in which deaths or death-rates are given, the numbers have been corrected for these transfers since the beginning of the year 1904.

The death-rate for 1914, although distinctly under the rate for the preceding year, was higher than in any other year of the preceding ten years, except 1904, when the rate was 17·7. The average rate for the ten years 1904-1913 was 15·9. At the commencement of civil registration, about sixty years ago, the death-rate in Aberdeen was about 24 to 25, so that the rate at the present time is about two-thirds of what it was in these earlier years.

The *average age at death* of all persons dying during the year was 39·5 years. In the preceding year, it was 36·7, and in 1912, 40·5. The average age at death has not been calculated for the years previous to 1891. In 1891-1895, it averaged 32·9 years. As the average for the past five years, including 1914, is 39·0 years, there has been, since 1891-1895, an extension of the age at death by fully six years. Part of this increase is no doubt due to the effect of the declining birth-rate in

TABLE III.—ABERDEEN.—MORTALITY FROM ALL CAUSES AT VARIOUS AGE-PERIODS*

(per 1,000 of population at each age).

Year.	INFANTILE MORTALITY.	AGE PERIOD.						All Ages.
	Deaths of Infants under 1 year per 1,000 Births.	0—5 years. (Pre-School Period.)	5—15 years. (School Period.)	15—25 years. (Adolescent Period.)	25—45 years. (Early Mature Period.)	45—65 years. (Late Mature Period.)	65 years and upwards. (Post-mature Period.)	
1914	**121**	**40·3**	**5·4**	**4·6**	**7·2**	**21·6**	**92·0**	**16·7**
1913	153	54·1	3·8	4·6	7·0	20·4	89·7	17·6
1912	127	41·1	2·9	3·5	6·5	20·6	88·9	15·6
1911	139	45·5	3·1	3·9	5·7	18·8	79·1	15·2
1910	111	33·1	2·9	3·3	6·4	18·7	89·2	14·2
1909	149	48·6	3·0	3·7	6·8	21·7	81·6	16·3
Mean of 1909-1913 (Five years).	**136**	**44·5**	**3·1**	**3·8**	**6·5**	**20·0**	**85·7**	**15·8**
1908	129	43·2	3·0	3·6	7·4	21·2	82·8	15·8
1907	125	42·3	2·8	3·3	7·1	18·3	84·5	15·2
1906	127	45·2	2·6	3·8	7·4	17·7	83·1	15·5
1905	138	47·2	3·1	4·1	6·8	21·4	82·9	16·2
1904	151	58·0	3·2	3·8	8·0	20·3	83·0	17·5
Mean of 1904-1908 (Five years).	**134**	**47·2**	**2·9**	**3·7**	**7·3**	**19·8**	**83·3**	**16·0**
1901-1905	**143**	**52·2**	**3·1**	**4·6**	**7·4**	**21·3**	**83·3**	**17·1**
1896-1900	**144**	**54·2**	**3·4**	**5·0**	**9·2**	**22·2**	**81·6**	**18·1**
1891-1895	**147**	**57·5**	**4·5**	**5·8**	**9·3**	**22·7**	**86·5**	**19·3**
1886-1890	**140**	**52·9**	**4·8**	**7·0**	**10·5**	**22·9**	**88·1**	**20·2**
1881-1885	**126**	**50·9**	**5·4**	**6·4**	**10·1**	**23·8**	**86·3**	**19·8**
1876-1880	**129**	**53·1**	**6·2**	**7·7**	**11·3**	**22·1**	**86·6**	**20·9**
1871-1875	**133**	**57·5**	**7·7**	**8·2**	**12·0**	**22·6**	**91·5**	**22·4**
1866-1870	**133**	**68·0**	**7·2**	**8·9**	**12·4**	**22·2**	**91·2**	**23·5**
1861-1865	**130**	**68·9**	**8·1**	**10·5**	**13·4**	**24·7**	**98·7**	**24·9**
1856-1860	**126**	**67·8**	**9·3**	**9·8**	**12·6**	**21·8**	**97·5**	**24·1**

* Corrected for transferred deaths in 1904 and subsequent years.

reducing the proportion of infant deaths in the population. The infant mortality is always high as compared with that for other ages.

Excess of Birth-Rate over Death-Rate.—In Table II. will be found a column giving the excess of the birth-rate over the death-rate since the commencement of registration. The excess in 1914 was 7·9, which, with the exception of the excess (6·3) in the preceding year, is probably the lowest in any year since registration began. The excess in 1912 was 9·8; in 1911, 9·3; and in 1910, 12·0. The usual excess for many years before 1911 was about 11 to 14.

ANALYSIS OF THE DEATH-RATE.

(a) Mortality in Relation to Age and Cause (Tables III., IV., IV.(A), V., and VI.).

As was stated in the report for the year 1911, the system of classification of the causes of death was modified in that year so as to bring it into harmony with the International Classification, now in the main adopted by the Scottish Registrar-General. It is scarcely necessary to mention that in the accompanying tables this classification has been followed in arriving at the figures given for all the preceding years.

Infantile Mortality.—During the year, there were 487 deaths among children under one year of age, as compared with 591 in the preceding year and 530 in 1912. The infant mortality rate, expressed as deaths per 1,000 births, was 121 during the year, as against 153 in the preceding year, 127 in 1912, 139 in 1911, 111 in 1910, and 149 in 1909. After the excessive rate in the preceding year, it is satisfactory to find that the rate in 1914 was, with the exception of 1910, the lowest for at least ten years. The rate in 1913 suffered from the presence in the City of an extensive epidemic of measles and from a considerable prevalence of whooping cough, both of which diseases are well known to be very serious for infants. In 1914, there was very little of either of these diseases in the City. Low, however, as was the infant mortality rate for 1914, it was not yet by any means so low as it ought to be if all the infants received proper care during their first year of life. I have repeatedly pointed out that, in a town in which such care is duly exercised, the infant mortality ought not to exceed 60 or 70. It has, however, to be admitted that there are as yet practically no large towns in this country with so low a rate.

In Table IV.(A) two interesting columns are given, as in the preceding year, showing the number of infants surviving at the end of one year from birth, and the proportion which the survivors bear to the population. This rate, which represents the net gain to the population after the peculiar perils of the first year of life have been passed, was, in 1914, 21·4 per 1,000 of population, as against 20·1 for 1913, and an average of 23·5 for the ten years 1904-1913. This rate is a more exact indication than the birth-rate of the real internal addition to the population. If the infantile death-rate could be reduced to what is usually regarded as reasonably attainable proportions, the effect on the population of the fall in the birth-rate in recent years would be considerably neutralised.

TABLE IV.—ABERDEEN.—CAUSES OF DEATH AMONG CHILDREN UNDER FIVE YEARS OF AGE.—*Year* 1914.

(*Corrected for transferred deaths.*)

CAUSES OF DEATH.	AGE.																	Average for Preceding 5 Years. (1909-13.)	
	FIRST YEAR.												SECOND TO FIFTH YEARS.				Total		
	First Four Weeks.				First Three Months.			The Four Quarters.				Total							
	0–1	–2	–3	–4	*0–1	–2	–3	*0–3	–6	–9	–12	*0–1	–2	–3	–4	–5	*1–5	0–1	1–5
Congenital Malformations	2	2	1	2	7	1	2	10	...	...	...	10	1	1	...	...	2	9	...
Prematurity	70	7	10	5	92	2	6	100	2	1	...	103	...	...	...	...	...	107	...
Atelectasis and Diseases of Early Infancy	18	4	2	2	26	...	...	26	...	...	...	26	...	...	...	...	...	22	...
Atrophy, Debility, and Icterus	9	9	4	5	27	9	8	44	13	9	2	68	...	...	...	...		74	...
Diseases of Digestive System, incl. Diarrhœa	...	1	2	...	3	13	12	28	34	20	14	96	17	7	2	1	27	73	20
Urinary Diseases	...	...	...	1	1	...	...	1	...	...	...	1	2	2	2	1	7	1·0	1·4
Diseases of Circulation	...	...	...	...	...	...	...	...	1	...	...	1	1	..	1	1	3	0·6	1·2
Pneumonia	...	...	1	...	1	2	5	8	12	6	10	36	21	5	2	2	30	59	43
Bronchitis	1	1	..	...	2	3	4	9	10	8	6	33	5	1	...	1	7	43	9
Convulsions	4	1	2	1	8	4	8	20	3	5	2	30	8	4	1	1	14	39	11
Inflammation of Brain and Membranes	...	...	...	...	...	1	...	1	3	...	1	5	3	1	1	...	5	8	7
Epidemic Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	..	0·2	0·2
Measles	...	...	...	...	...	...	...	...	...	1	1	2	1	2	...	1	4	23	42
Whooping Cough	...	...	...	1	1	1	1	3	3	2	...	8	2	2	...	...	4	31	30
Scarlet Fever	...	...	...	...	...	...	...	...	...	1	3	4	4	6	9	8	27	1·0	10
Diphtheria	...	..	...	...	...	...	...	...	...	...	5	5	16	19	16	20	71	5	27
Typhoid Fever	..	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	..	0·0	0·4
Tuberculosis of (*a*) Brain	...	...	...	...	...	...	1	1	2	3	1	7	6	2	3	1	12	6	17
Tuberculosis of (*b*) Abdomen	...	...	...	...	...	...	1	1	...	1	...	2	5	4	...	...	9	5	8
Tuberculosis of (*c*) Lungs	...	...	...	...	...	...	...	...	1	...	...	1	2	...	1	...	3	1·0	6
Tuberculosis of (*d*) Other forms	...	...	...	...	...	...	...	...	...	2	2	4	3	...	...	1	4	2·2	4
Syphilis	...	...	3	1	4	3	2	9	3	2	...	14	...	1	...	...	1	15	2
Burns and Scalds	...	...	...	...	...	...	...	...	...	1	...	1	2	2	...	...	4	0·8	8
Suffocation	1	...	2	...	3	1	1	5	3	...	...	8	...	...	...	...	...	7	1
Other Accidents	.	...	...	...	...	...	...	...	...	...	...	...	1	1	1	3	6	0·2	3·2
Other Causes	2	...	1	1	4	3	3	10	5	5	2	22	11	5	2	1	19	33	21
ALL CAUSES	107	25	28	19	179	43	54	276	95	67	49	487	111	65	41	42	259	566	272
Average for preceding 5 years	119	28	28	23	198	56	56	310	105	81	70	566	154	59	34	25	272		

* This column includes all deaths in preceding columns.

TABLE IV. (A).—ABERDEEN.—INFANT MORTALITY.—*Years* 1904-1914.

(Corrected for transferred deaths since 1904.)

YEAR.	No. of Births.	Births per 1,000 of Population.	Deaths of Infants under 1 year.	Deaths of Infants under 1 year per 1,000 Births.	No. of Survivors.	Survivors per 1,000 of Population.	NO. OF DEATHS AMONG CHILDREN DYING UNDER 1 YEAR OF AGE FROM CHIEF CAUSES.										No. of Deaths from All Causes at Ages		
										Common Zymotic Diseases.									
							Prematurity, Congenital Defects, and Dis of Early Infancy.	Dis. of Digest. System, Wasting and Debility, Convulsions.	Bronchitis and Pneumonia.	Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.	Tuberculosis.	Syphilis.	Suffocation.	Under 2 Weeks.	Above 2 Weeks and under 6 Months	Above 6 Months and under 1 Year.
1914 . .	4006	24·6	487	121	3519	21·4	133	188	69	2	8	5	4	14	14	8	132	239	116
1913 . .	3852	23·9	591	153	3261	20·1	137	195	106	47	15	7	3	11	13	7	158	250	183
1912 . .	4145	25·4	530	127	3615	22·0	135	160	102	12	30	4	1	9	18	8	142	275	113
1911 . .	4009	24·5	563	139	3446	20·8	116	177	93	44	45	4	1	21	14	6	132	257	174
1910 . .	4319	26·2	478	111	3841	23·3	132	181	75	3	8	7	0	12	14	5	130	246	102
1903 . .	4518	27·5	671	149	3847	23·4	162	194	133	7	56	5	0	22	16	7	176	311	184
Average 1909-1913	4169	25·5	567	136	3602	21·9	136	181	102	23	31	5	1·2	15	15	7	148	268	151
1908 . .	4472	27·3	577	129	3895	23·8	113	191	98	30	34	2	1	20	10	7	112	305	161
1907 . .	4502	27·6	561	125	3941	24·2	141	175	108	12	45	4	2	18	7	7	135	270	156
1906 . .	4712	29·0	599	127	4113	25·3	137	201	84	29	29	3	1	21	12	8	156	285	158
1905 . .	4892	30·3	678	138	4214	26·1	136	255	132	12	16	3	0	19	18	8	142	360	176
1904 . .	4885	30·5	733	151	4152	25·9	139	254	131	28	66	3	0	32	8	5	157	361	215
Average 1904-1908	4693	28·9	630	134	4063	25·1	133	215	111	22	38	3	0·8	22	11	7	140	316	173
Average 1904-1913 (ten years)	4432	27·2	599	135	3833	23·5	135	198	107	23	35	4	1·0	19	13	7	144	292	162

The chief causes of mortality among infants, as appearing in Table IV., have been slightly altered in their classification for the year under report, as compared with preceding years, in order to bring the classification into more strict compliance with the newer classification of the Registrar-General. The changes mainly affect—indeed, they almost entirely affect—the deaths from congenital defects and from certain diseases peculiar to early infancy.

The chief cause of mortality during the year was, as usual, prematurity, with 103 deaths, or 5 more than in the preceding year, but fewer than the number (112) for 1912. Of the 103 deaths from prematurity during 1914, about two-thirds took place within the first week of birth.

The next largest cause of death was, as is not infrequent, diseases of the digestive system (including diarrhœa), which produced 96 deaths. This number is slightly above the number (84) for the preceding year, and is substantially above the average (73) for the preceding five years. It is interesting to note that since the year 1908, when there were 94 deaths from this important cause, there was a gradual decline till 1911, followed by a gradual increase to 1914, the figures for the successive years, starting with 1908, being 94, 85, 69, 63, 65, 84, and 96.

The increase in 1914 was not specially due, as often happens in warmer climates, to the occurrence in the autumn months of weather conditions favourable to diarrhœal diseases. In August, September, and October, there were, in all, 24 deaths from diseases of the digestive system, or scarcely more than in May, June, and July, with 22 deaths, and considerably fewer than in February, March, and April, with 30 deaths.

Atrophy, debility, and icterus came next, with 68 deaths, as against an average of 74 for the preceding five years. Fully one-half of these deaths occurred during the first two months of life, but especially during the first month.

Pneumonia and bronchitis also took a prominent place among the causes of death, but considerably below the position usually occupied by these diseases, there being 36 deaths from pneumonia in 1914, as against an average of 59 in the preceding five years, and 33 deaths from bronchitis, as against an average of 43 Although these diseases often arise independently of the ordinary zymotic diseases, such as measles and whooping cough, they form not infrequently a concomitant or sequel of attacks of these diseases, and accordingly the death-rate from lung diseases is usually higher or lower according as the prevalence of measles or whooping cough has been excessive or the contrary.

Another important cause of death during the year was convulsions, which led to 30 deaths of infants. This number was, however, one of the lowest in recent years, and was under the average (39) for the preceding five years. Convulsions are, of course, a symptom of disease and not a disease in themselves, although this observation is true of a considerable number of vaguely designated diseases. The actual causes of convulsions in infants are not well understood. Convulsions were at one time not infrequently attributed to teething, but this view has now fewer supporters, and is discountenanced by the fact that deaths from convulsions are not more frequent at the teething period than in the earlier months of infant life.

Convulsions are sometimes believed to be associated also with digestive disturbances, but it is interesting to observe that the death-rate from convulsions does not appear to rise or fall with the death-rate from digestive and diarrhœal diseases. Thus in Aberdeen, during the last year, a low death-rate from convulsions was associated with a high death-rate from digestive diseases, while, in 1912, a high death-rate from convulsions accompanied a low death-rate from digestive diseases. Convulsions sometimes also arise undoubtedly as the result of certain zymotic diseases; and where the zymotic disease has been diagnosed and death has occurred, the death is, of course, attributed to the zymotic and is classified accordingly. In some cases the zymotic has not been recognised, and death may be reported to be due to convulsions. A comparison, however, of the deaths from measles and whooping cough—the two most common zymotics among infants—with the deaths from convulsions, does not bring out any very close relationship between excessive prevalence of one or other or of both of these diseases and a high death-rate from convulsions. It is true that there were exceptionally few deaths from measles and whooping cough during 1914, when at the same time there were exceptionally few deaths from convulsions; but, on the other hand, in 1911 there was, along with an almost equally small number of deaths from convulsions, a distinctly high prevalence of both measles and whooping cough.

Reference has just been made to the low prevalence of measles and whooping cough during the past year. There were only 2 deaths from measles and 8 from whooping cough, as against averages of 23 and 31, respectively, for these two diseases in the preceding five years. There were 4 deaths from scarlet fever. This was above the average, which was only one death for the preceding five years, scarlet fever being relatively much less fatal to infants than measles and whooping cough. Diphtheria caused 5 deaths among infants during the past year, being exactly the same number as the average for the preceding five years. Tuberculosis was the cause of 14 deaths, or exactly the same number as the average.

Syphilis is, unfortunately, a fairly prominent cause of death among infants, 14 deaths from this cause having been reported during the year, or one less than the average (15) for the preceding five years. The certified deaths probably do not represent the total number of deaths from this very serious disease, as the symptoms sometimes are obscure although causing death, and there is a natural reluctance on the part of the medical attendant to introduce syphilis into a death certificate if the death can, with any show of reason, be ascribed to another cause.

A comparison of Aberdeen with the other principal towns in Scotland, in respect of the infantile deaths from syphilis, shows that the average number of deaths in the five years 1909-1913, reckoned upon the same basis of population as that of the City of Aberdeen, was 13 for Dundee, 11 each for Edinburgh and Leith, 10 for Glasgow, and 9 for Paisley. The corresponding number for Aberdeen was 15, as already stated. Of course, much depends, in instituting such a comparison, on the relative frankness of the practitioners in the different towns in filling in the cause of death, but the figures, so far as they go, appear to indicate a distinctly larger proportion of syphilitic infants in Aberdeen than in the other principal Scottish towns.

Suffocation was the cause of 8 deaths during the year, or one more than the average. There was only one death from burns and scalds.

In Table IV.(A) the causes of death are somewhat differently grouped from those in Table IV. Causes such as prematurity, congenital defects, and diseases of early infancy, which are probably to be associated with pre-natal or parturient conditions, are brought together into one group, while another group is constituted by diseases of the digestive system, wasting and debility, and convulsions—causes which are mainly dependent on the care of the infant after birth. In 1914, it will be observed that there was a slight fall in both groups, the fall being somewhat more marked in the latter than in the former group. As contrasted with the averages for the preceding ten years, the first group showed scarcely any decline, the deaths for 1914 being 133, as against an average of 135. The latter group, however, showed a more decided fall, the average deaths numbering 188 in 1914, as compared with an average of 198.

The table also allows of a ready comparison being made between the past year and the preceding ten years, in respect not only of the two groups referred to, but also in regard to certain other important causes of death, including each of the principal zymotics. It will be seen that deaths from lung diseases (bronchitis and pneumonia) were much below the average, as were also, although in less degree, deaths from tuberculosis. Deaths from measles and whooping cough were exceptionally few.

In this table the infants have been divided, in respect of age, into three specially arranged groups, namely, one of under two weeks old, representing the period most reflecting the effect of ante-natal conditions; another of between two weeks and under six months, covering the period before the commencement of teething, during which, in ordinary circumstances, the infant should continue to be wholly dependent for its food on the mother's milk; and third, the remaining six months of the first year of life, during which, as a rule, the use of other kinds of food, supplementary or substitutionary, begins. It will be seen that, at the earliest period, there was, as compared with the average for the preceding ten years, a fall in the death-rate somewhat greater than was noted for the prematurity group of diseases; that during the second period there was a more marked fall, namely, of about 18 per cent.; and that during the third period the fall was still greater, and amounted to 28 per cent.

Visitation of Infants by Health Visitors.—The Notification of Births Act continues to be of invaluable assistance in enabling the Health Visitors to reach early the mothers and babies requiring their attention. The Act is being worked with great smoothness and, in all the circumstances, with remarkable completeness. The notifications are checked by returns obtained from the registrars; and, in each case in which no notification has been received, a notice is at once sent to the parents directing their attention to their neglect to notify, and to their consequent liability to penalty.

During the year there were notified to the Health Department, under the Notification of Births Act, 3,990 live-births and 150 still-births. The total number of live-births registered by the registrars within the City, exclusive of the births at Oldmill Poorhouse, were 4,042. The subjoined table shows that out of the births so registered within the City, 2,854, or about 71 per cent., were notified within 48 hours; 538, or 13 per cent., between two and four days; and 250, or about 6 per cent., between four and seven days. The remaining 374 intimations, or about 9 per cent., were, for the most part, received after the parents had been reminded of their duty. In 52 births, or fully 1 per cent., no intimation of any kind was received. In the preceding year, the corresponding percentages were 76, 12, 5, and 6, respectively, and the number of births regarding which no intimation was at any time received was 35, or under 1 per cent.

BIRTHS NOTIFIED IN 1914 UNDER NOTIFICATION OF BIRTHS ACT.*

NOTIFIED BY	LIVE-BORN.					STILL-BORN.				
	Within 48 Hours.	4 Days.	7 Days.	Later.	All.	48 Hours.	4 Days.	7 Days.	Later.	All.
Parents	196	40	20	172	428	2	1	1	—	4
Medical Attendant . .	1,650	300	150	157	2,257	59	7	8	4	78
Midwife or Nurse . .	905	189	75	31	1,200	51	12	2	—	65
Parent and Med. Attendant or Midwife	65	7	5	14	91	3	—	—	—	3
Med. Attendant and Midwife	12	2	—	—	14	—	—	—	—	—
TOTALS	2,854	538	250	374	3,990	115	20	11	4	150

* Total Live-Births registered by Registrars—4,042, exclusive of 15 in Poorhouse outside City Boundary.

The table further shows the number of births notified by the parents, the medical attendant, and the midwife, respectively, as also the cases in which notification was received from more than one of the parties named in the Act as being responsible for the notification.

The proportion of births notified by the parents shows a rapid fall as the years go on. Thus, in 1910—the first full year of the operation of the Act within the City—the number of live-births notified by parents was 1,609. In 1914, it had fallen to 428. On the other hand, there has been a correspondingly large increase in the notifications by the medical attendant, or by the midwife or nurse. Thus, in 1910, the notifications by the medical attendant were 1,712, while in 1914 they had risen to 2,257. The notifications by the midwife or nurse, in 1910, were 596, and were 1,200 in 1914. The cases which are notified by both the parent and the medical attendant are now very few. They were 334 in 1910, and only 91 in 1914.

The same is true of the notifications of still-births. Scarcely any of these are now being notified by the parents. Practically all still-births are being notified either by the medical attendant or by the midwife or nurse. These changes point to the doctors and nurses being increasingly willing to co-operate in working the Act.

The following table gives the number of infants visited, and, in selected cases, supervised by the three Health Visitors of the Corporation appointed for the purpose of dealing with infants and with domestic cleanliness. The table shows that the Health Visitors called during the year at the homes of 2,715 infants, or fully two-thirds of all the children born in the City. The visits were, as usual, mostly confined to the smaller houses, that is, houses of one to three rooms. The proportion of breast-feeding (whole or part) amounted to 89 per cent. in one-roomed houses; 85 per cent. in two-roomed houses; 74 per cent. in three-roomed houses; and 64 per cent. in four-roomed houses. The percentage of breast-fed infants in the total cases visited by the Health Visitors during the year was 82, or exactly the same as in the preceding year. In 1912, it was 78.

Aberdeen.—Infants Visited by Health Visitors.*

(Grouped according to Registration District.)

Size of House.	St. Nicholas.	St. Machar.	Rubislaw.	Woodside.	Old Aberdeen	Nigg (Torry).	Total.	Breast-fed (whole or part).	Hand-fed.	Percentage of Breast-fed in total Infants Visited.
1 Room .	315	30	64	6	1	21	**437**	391	46	**89**
2 Rooms .	702	236	305	62	25	202	**1,532**	1,305	227	**85**
3 Rooms .	226	112	113	34	7	89	**581**	429	152	**74**
4 Rooms .	98	19	22	13	5	8	**165**	106	59	**64**
All Houses, 1914 . .	**1,341**	**397**	504	**115**	**38**	**320**	**2,715**	**2,231**	**484**	**82**
All Houses, 1913 . .	1,189	804		152	45	299	2,489	2,050	439	**82**

* Excluding Infants found to have died previous to visitation.

The table includes only such infants as were found alive at the first visit. Altogether, 85 infants had died before visitation. Of these, 20 were in one-roomed houses; 48 in two-roomed houses; 13 in three-roomed houses; and 4 in houses of four rooms.

The Health Visitors, in addition to visiting the homes of infants and giving instructions to mothers in regard to the care and especially the feeding of the infants, devoted an appreciable part of their time to assisting in the work of the Mothers' and Babies' Clubs. They also took part in the lectures at these Clubs. The lectures were, however, mainly given by the honorary medical officers, and, in respect of cookery, chiefly by Mrs. Livingston, whose services were much appreciated.

As is shown in the accompanying table, it was found by the Visitors that of the 2,800 infants visited, 1,596, or 57 per cent. of the births, had been attended by a private medical practitioner, and that 1,007, or 36 per cent., had been attended by a midwife or nurse. In 71, or 2·5 per cent., attendance was received in connection with the outdoor department of the Maternity Hospital; while in the remaining 126 cases, or 4·5 per cent., the mother gave birth to her child within the Maternity Hospital itself. In 48 of the cases attended by midwives, or in 1 out of every 21 cases, the assistance of a medical practitioner was obtained by the midwife on account of difficulty in the confinement.

Aberdeen.—Nature of Professional Attendance at Birth—1914.

Year.	* Total Registered Births.	Number Visited by Health Visitors.	Private Medical Practitioner.		Midwife or Nurse.		Maternity Hospital.			
							Outdoor.		Indoor.	
			No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
1911	4057	2839	1601	56·7	911	32·0	180	6·6	139	4·7
1912	4187	2447	1279	52·2	833	34·1	212	8·7	123	5·0
1913	3889	2593	1539	59·3	865	33·4	81	3·1	108	4·2
1914	4057	**2800**	1596	**57·0**	1007	**36·0**	71	**2·5**	126	**4·5**

* Uncorrected for transfers.

It will be seen from the table that the proportion of cases attended by a private medical attendant was somewhat lower than in the preceding year, while the proportion attended by a midwife was somewhat higher. This change is perhaps due to the response in the later months of the year by a considerable proportion of the medical men of the City to the call for their services in connection with the War.

It will also be observed that the large decline in the attendance on cases as outdoor patients by the staff of the Maternity Hospital, which was very notable in 1913, was further emphasised in 1914. Thus, as against 212 cases so attended in 1912, there were only 81 in 1913, and 71 in 1914. On the other hand, it is satisfactory to find that the number of patients seeking the benefit of attendance within the wards of the Maternity Hospital rose, after a distinct fall in the preceding year, to 126 in 1914. In 1912, the number had been 123, and in 1913, 108. These fluctuations in the number of women making use of the Maternity Hospital are due to the effect of the Maternity Benefit under the National Insurance Act.

The Association for Improving the Condition of the Poor and similar organisations gave, as usual, ready assistance, on the request of the Visitors, to many of the poorer and badly fed mothers. The Managers of the Soup Kitchen also continued to supply to the Health Visitors many hundreds of tickets for soup and other food. This help has been of great value. The Mothers' and Babies' Clubs, especially the Central Club, expended out of their own funds a considerable sum in providing milk for both mothers and infants.

In connection with the work of the Health Visitors, invaluable help continued to be received from the Mothers' and Babies' Clubs and from the Guild of Voluntary Visitors. There were 71 such Voluntary Visitors during the year, as compared with 66 in the preceding year. Not only are the Clubs and the Guild undertaking a large amount of active and personal work, but their presence in the movement for the improvement of the conditions of infant life is a great stimulus and encouragement to the Public Health Department. There is, however, ample room for increase in the number of Voluntary Visitors, as not a few infants and their mothers require to be frequently and regularly visited in order to obtain the best results. A Voluntary Visitor who can undertake the supervision of one or two such cases for some months and give that personal sympathetic interest and attention to their cases, which is more possible when the cases are few than when, as in the instance of the official visitors, the cases dealt with by each visitor are numerous, may secure results that it might be difficult otherwise to obtain.

There are now five Mothers' and Babies' Clubs carrying on work in different districts of the City, each under its own Committee, but all under the supervision of the General Committee. The districts supplied with Clubs are the Gallowgate district, the Woodside district, the Old Aberdeen district, the Footdee district, and the Torry district. The first Club, or Central Club, in the Gallowgate, was founded in 1909, and the last Club, the Torry Club, in 1913. There is still room for additional Clubs, as, for example, in the Denburn district and in the Holburn district.

The Clubs are attended by expectant mothers as well as by mothers with babies. The total number of mothers enrolled in the various Clubs in 1914 was 577, as against 520 in the preceding year.

Each Club meets for an hour or more on an afternoon once a week all the year round, except during two or three months in summer, when many of the ladies who are undertaking the work of the Clubs are on holiday. A record is kept of the progress of each baby, as ascertained by weighing and otherwise. Hygienic advice is given where necessary by the Honorary Medical Officer of the Club, or by the Health Visitors. A short lecture or talk on the care of infants or on the health of mothers or on general hygiene is given at each meeting in certain of the Clubs, and in other Clubs as frequently as they can be conveniently arranged. The instruction has always included some lectures in cookery. Addresses on temperance are also given. The honorary medical officers take a considerable share in providing the instruction, but valuable assistance is also obtained from various voluntary workers. One or more of the Health Visitors attend each meeting of the several Clubs.

The Clubs are mainly supported by voluntary contributions. The Town Council has for some time been giving a grant of £25 a year towards the support of the Clubs. A large part of this grant is being expended on milk. The Health Department continued to supply, through the Health Visitors and the Clubs, specially designed cans for sterilising milk for feeding infants and special tubeless feeding bottles, the cans and bottles being supplied gratuitously to such mothers as were unable to pay for them, and to other mothers at cost price.

The Day Nursery in Loch Street, which was established in the preceding year, continued to do excellent work in 1914 under the management of a Committee appointed by the Mothers' and Babies' Clubs. The work of the Nursery is carried out by a matron and an assistant, and Dr. Agnes Thomson acts as honorary adviser. The Nursery is capable of accommodating about 20 children, and is intended for the care during the day of infants whose mothers are engaged in earning their living outside their own homes. The daily charge for each infant, which includes food and attendance, is 4d. The mothers taking advantage of the Nursery have been mostly fishworkers and charwomen. A few are millworkers. Some are in steady employment, others are only casually employed. During the year, 102 children were admitted, some for a few days only, and others for a few weeks or months. As a rule, the whole of the accommodation is occupied.

The need for such Nurseries is so obvious that it would be of great help to many mothers and infants to have the number of the Nurseries increased. In order to be of the fullest use, they must be in different parts of the City, so as to meet the convenience of the mothers.

It may be mentioned that, including a sum of twelve guineas for rent and taxes —the rent being a very low rent for the amount of accommodation obtained—the total expenditure on the Day Nursery during the year amounted to £213, *less* a sum of £45 to £46 paid by the mothers. The net cost was, therefore, £167. There is no other public institution in the City which gives better value for the expenditure than the Day Nursery.

In all the work of the Mothers' and Babies' Clubs and the Day Nursery, the Health Department is under a very great obligation to the numerous ladies who devote so large a part of their time to this work, as also to the ladies who form the Guild of Voluntary Visitors. The Department and the public are very specially indebted to Mrs. G. B. Esslemont, President of the General Committee, the wife of one of the members of Parliament for the City, and to Miss Jean Croll, the Honorary Secretary. The Department is also under great obligations to the medical practitioners attached as honorary medical advisers to each Club for their services in the infant consultations associated with the Clubs and for lectures to the members of the Clubs. These honorary medical advisers were, during the year, Dr. James Smart, Dr. Agnes Thomson, Dr. Laura Sandeman, Dr. Charles Forbes, and Dr. William Clark. At the commencement of the War, Dr. Smart, who holds a commission in the R.A.M.C., had to give up temporarily his work in connection with the Clubs, and his duties have been kindly undertaken by Dr. Thomson. Since the close of the year, Dr. Sandeman and Dr. Forbes have also been engaged on War duty—both of them having gone to France.

Mortality at Pre-School Age-Period (1 *to* 5 *years), excluding Infant Period (Tables III., IV., and V.).*—The number of deaths at this age-period during 1914 was 259, which is equivalent to a death-rate of 17·5 per 1,000 of the population at this age, as against 400 deaths in the preceding year, with an equivalent death-rate of 27·3. The average rate for the preceding ten years was 18·1.

In the preceding year, the excessive mortality was mainly due to deaths from the ordinary zymotic diseases. During 1914, the deaths from these diseases, taken as a whole, although still numerous, were not greatly above the average. The largest cause of death was diphtheria, with 71 deaths, as against an average of 27 in the preceding five years. There was thus a very high mortality from this disease. The deaths from scarlet fever were also above the average, being 27, as against an average of 10. On the other hand, deaths from both measles and whooping cough were greatly under the average. There were only 4 deaths from the former, as against an average of 42, and 4 deaths from the latter, as against an average of 30.

The deaths from pneumonia amounted to 30, but were considerably under the average for the preceding five years, namely, 43. Deaths from diseases of the digestive system (including diarrhœa) numbered 27, and were above the average, which was 20. Deaths from convulsions were also somewhat above the average, being 14, as against 11. Deaths from urinary diseases were considerably above the average, being 7, as against 1·4. Deaths from all forms of tuberculosis amounted to 28, and were considerably under the average (35). There was 1 death from syphilis, as against an average of 2. Deaths from burns and scalds were fewer than usual, being only 4, as against an average of 8.

Mortality at School Age-Period (5 *to* 15 *years). (Tables III. and V.)*—The deaths at this age-period amounted to 195, or 5·4 per 1,000 of the population at this age. As will be seen from Table III., the mortality at this age-period was unusually high, the average for the preceding ten years being only 3·0. The main cause of the high mortality was the exceptional prevalence of both scarlet fever and diphtheria, the former accounting for 40 deaths at this age-period and the latter for 51. There were no deaths from measles or whooping cough, and there was only one death from typhoid fever. Perhaps, as in some measure arising out of the excessive prevalence of diphtheria and scarlet fever, there was some increase of mortality from pneumonia, diseases of the circulatory system, diseases of the digestive system, and especially diseases of the nervous system. There was a considerable excess of deaths from accident, 4 being due to drowning, 2 to burns and scalds, and the remainder to other forms of violence. Deaths from tuberculosis, especially the pulmonary forms of this disease, were considerably under the average.

Cleansing of Verminous Children and Households.—The joint arrangement between the Town Council and the School Board for the cleaning of verminous children and households was continued during the year, and had the advantage of the greater facilities now offered in the specially designed and constructed cleansing

TABLE V.—ABERDEEN.—MORTALITY AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES.

(Corrected for transferred deaths.)

AGE.	ALL CAUSES.	Zymotic Diseases.			Tuberculous Diseases.		Respiratory Diseases.			Diseases of Circulatory System	Diseases of Genito-Urinary System.	Nervous Diseases.			Dis. of Digest. Syst. incl. Diarrhoea.	Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Ordinary.	Venereal.	Septic.	Phthisis.	Other Tuberculous	Pneumonia.	Bronchitis.	Other Respiratory.			Cerebral Haemorrhage & Hemiplegia.	Convulsions	Other Nervous.					Under age of 1 year.	Above age of 65 years.	
A.—NUMBER OF DEATHS—YEAR 1914.																					
Under 1 year,	487	25	14	0	1	13	36	33	5	1	1	0	30	5	96	0	129	9	62	0	27
1—5 years,	259	109	1	0	3	25	30	7	2	3	7	1	14	8	27	0	2	10	0	0	10
5—15 ,,	195	94	0	0	8	20	8	0	1	9	3	0	0	14	12	1	1	15	0	0	9
15—25 ,,	144	17	0	0	39	10	13	0	2	13	7	0	0	5	14	1	0	10	0	0	13
25—45 ,,	318	11	2	2	73	9	24	7	8	41	13	5	0	21	23	22	0	22	0	0	35
45—65 ,,	543	19	3	3	40	6	26	16	8	133	42	60	0	25	30	74	0	25	0	0	33
65+ ,,	806	19	1	0	7	1	40	61	13	212	30	102	0	16	35	87	0	19	0	137	26
ALL AGES,	2752	294	21	5	171	84	177	124	39	412	103	168	44	94	237	185	132	110	62	137	153
B.—DEATH-RATE PER 100,000 OF POPULATION AT EACH AGE—YEAR 1914.																					
Under 1 year,	13288	682	382	0	27	355	982	900	136	27	27	0	819	136	2619	0	3520	246	1692	...	737
1—5 years,	1745	734	7	0	20	168	202	47	13	20	47	7	94	54	182	0	13	67	...	...	67
5—15 ,,	536	258	0	0	22	55	22	0	3	25	8	0	0	38	33	3	3	41	...	...	25
15—25 ,,	458	54	0	0	124	32	41	0	6	41	22	0	0	16	45	3	0	32	...	...	41
25—45 ,,	721	25	5	5	165	20	54	16	18	93	29	11	0	48	52	50	0	50	...	...	79
45—65 ,,	2158	76	12	12	159	24	103	64	32	529	167	238	0	99	119	294	0	99	...	...	131
65+ ,,	9201	217	11	0	80	11	457	696	148	2420	342	1164	0	182	400	993	0	217	...	1564	297
ALL AGES,	1674	179	13	3	104	51	108	75	24	251	63	102	27	57	144	113	80	67	...	...	93
C.—DEATH-RATE PER 100,000 OF POPULATION AT EACH AGE—AVERAGE FOR TEN YEARS—1904-1913.																					
Under 1 year,	15305	1695	329	50	35	437	1391	1263	157	25	28	25	1083	325	2134	7	3187	210	2390	...	531
1—5 years,	1814	679	7	4	33	236	297	81	29	8	8	5	70	7	131	4	14	79	...	...	62
5—15 ,,	303	59	0	4	33	66	17	2·6	4	19	6	0·3	4	21	26	1·1	1·4	18	...	...	21
15—25 ,,	375	15	1·5	4	148	27	21	0·6	7	28	10	3	0	23	23	5	0·3	26	...	...	27
25—45 ,,	691	19	14	15	184	21	54	12	11	87	36	12	0·4	46	36	40	0·2	50	...	..	67
45—65 ,,	1990	39	3	15	144	15	126	107	39	402	124	186	13	119	126	329	0	78	...	...	134
65+ ,,	8447	142	5	37	63	19	352	923	138	1782	447	1033	2·4	251	427	841	0	152	...	1354	472
ALL AGES,	1590	137	10	11	115	61	120	105	24	189	55	86	33	65	125	105	79	55	...	...	90

block erected at the City Hospital, and completed early in the year. During the year, the inmates, together with the clothing and bedding, of 60 households were removed to the Cleansing Station for cleansing and disinfection. Each house was thoroughly cleansed and disinfected, while the clothing and bedding were sterilised in the steam disinfector, and each inmate was given a bath. The services of one inspector are exclusively employed in the visitation of families in the school children of which the school medical staff have found indications of uncleanliness. In addition to the inspector, a married couple are employed at the Cleansing Station for the work carried on there.

As in preceding reports, I wish to draw attention once again to the continued need in certain parts of the City for a more ample provision of playgrounds for children. These ought not to be difficult to procure in the newer parts of the town, where, under the powers conferred upon Local Authorities by the Housing and Town Planning Act, the planning of streets and spaces can be definitely secured, although, as yet in Aberdeen, practically no effective step has been taken in this direction. In the older and denser parts of the City, the problem of providing playgrounds is naturally more difficult, although luckily the east end of the City is skirted by the sea links, which form the most extensive and popular of all the recreation grounds of the City for both children and adults. The large clearance of old properties in the Gallowgate, followed as it has been by the definite laying out of a playground for children, has proved of great advantage to the children of the poorer classes, but there are still several more or less densely populated parts of the City for which these open places or recreation grounds are too remote for regular use by, at least, the younger children, who cannot be allowed by their mothers to go very far from their homes. There are not a few dilapidated and unoccupied properties in certain of these areas, which, if they were demolished and their sites cleared, by arrangement with the owners, could be made to serve a most useful purpose as playgrounds. A large number of small playgrounds are almost more desirable than a few large ones, especially for very young children. The advantages of the appropriation of such a site for this purpose is well illustrated not only in the Gallowgate area, but also in a much smaller but quite satisfactory degree in the playground formed in Shuttle Lane by the purchase and removal, at the expense of the Corporation, of a few uninhabitable houses.

I have once more to acknowledge the great benefit to the health of the children of the City arising from the kindly services of those ladies and gentlemen who annually provide a holiday in the country for a large proportion of our poorer and more ailing children. There are few philanthropic schemes connected with the City that render more help to the public health than the Children's Fresh Air Fortnight, with its Home at Linnmoor, and the Aberdeen Camp for Ailing Children at Scotstown Moor. Such agencies come in at the right time in preventing children becoming really ill. It is more easy to prevent ill-health than to cure it. During 1914, the large number of 889 children were sent to the Homes at Linnmoor and Scotstown. In 1913, the number was 936, and in 1912, it was 841. The children are usually kept for a fortnight in the Homes, both of which are placed on extensive moors in the best of good air, and the more sickly children are kept for longer periods. The children are comfortably housed and well fed, and the Committees of Management take great personal interest in providing for their well-being and entertainment. The Home at Linnmoor also makes provision during the winter for children of the pre-tuberculous type. This continues to be of great assistance to the Public Health Department and the School Board in dealing with the younger members of tubercular families. The work of the Homes is being carried on at small cost, the maintenance of each child amounting to about three to four shillings weekly. Much of the services required in connection with conducting the Homes is, however, given gratuitously. These Homes are mainly doing the work that is being provided for largely by State help in Germany, in the form of so-called Forest Homes, which are usually open only during the summer. It would be an advantage, if the funds were adequate, to keep these Homes open for a somewhat longer time during the summer, and especially to extend the work that is being done at Linnmoor during the winter. The School Board have been utilising with much advantage the Linnmoor Home for ailing school children, and are paying the whole cost of their maintenance.

Many poor children received much benefit from the feeding provided for them during the winter months by the School Board from the funds previously in charge of the Educational Trust. The meals were supplied at the two centres—Queen Street and Woodside—in which such work has been carried on for several years, and also in a third centre, in the Torry district, which was opened towards the end of the year. At Queen Street, the children received two meals daily (breakfast and dinner) over the whole school session of ten months, the average attendance being 291 at breakfast and 302 at dinner. At Woodside, during the same period, dinners were supplied to an average of 52 children daily. At Torry, where the centre was open for only the last two months of the year, dinners were supplied to an average of 50 children daily. Thus about 400 children in all, in the later part of the year, were receiving considerable assistance in their feeding through the School Board.

As underfeeding is, unfortunately, a common feature of school life among the poorer children, the value of the efforts of the Children's Care Committee in assisting the nutrition of the children, and preventing that lowering of vital resistance which favours the onset of many diseases, including tuberculosis, cannot be placed too highly in any public scheme for dealing with the health of the young.

Mortality at Adolescent Age-Period (15 *to* 25 *years*). *(Tables III. and V.)*—The deaths at this period were 144 during the year, or 4·6 per 1,000 of the population at the period. The mortality rate is exactly the same as in the preceding year, but is substantially above the average (3·8) for the preceding ten years.

The high death-rate was in part due, as at the earlier age-periods, to the increased prevalence of diphtheria and scarlet fever, but the increase was also in some measure caused by the considerable augmentation of the deaths from pneumonia, which were about twice the average, as also from diseases of the circulatory system, the genito-urinary system, and diseases of the digestive system (including diarrhœa). The deaths from the last group were about doubled.

The mortality from pulmonary tuberculosis was, however, distinctly under the average, although there was a slight increase in the deaths from other forms of tuberculosis. Tuberculosis was, as usual, by far the most important single cause of death at this age-period, 49 deaths being attributable to this cause, or, roughly, about one-third of the total deaths at the adolescent period. In the preceding year, the total number of deaths from tuberculous disease at this period was 62; but it was only 39 in 1912.

There were only 10 deaths from accident and violence, as against 17 in the preceding year, when, however, the number was exceptionally high.

Mortality at Early-Mature Age-Period (25 *to* 45 *years*). *(Tables III. and V.)*—The number of deaths at this period was 318, giving a rate of 7·2 per 1,000 of the population at this period. The rate, although slightly higher than usual, is not greatly above the average for the preceding ten years, which was 6·9.

The chief cause of death at this period was tuberculosis, with 82 deaths, a number which is considerably under the average for the preceding ten years. Deaths from zymotic diseases were somewhat above the average, as were also deaths from diseases of the circulatory system, and, in a somewhat greater degree, the digestive system. Deaths from malignant diseases were also substantially above the average. Deaths from accident and violence amounted to 22, or a number exactly equal to the average.

Mortality at Late-Mature Age-Period (45 *to* 65 *years*). *(Tables III. and V.)*—The deaths at this period were 543, with an equivalent rate of 21·6 per 1,000 of the population at this period. The rate is slightly above the average for the preceding ten years, which was 19·9.

Here also there was an increase of deaths from zymotic diseases. Deaths from tuberculosis were also more numerous than usual. Deaths from diseases of the circulatory system and the genito-urinary system showed a considerable increase, as also did deaths from cerebral hæmorrhage. There was, however, a substantial decline in the deaths from pneumonia and bronchitis. There were 25 deaths from accident and violence, which is slightly above the average.

Mortality at Post-Mature Age-Period (65 *years and upwards*). *(Tables III. and V.)*.—The deaths at this period amounted to 806, with an equivalent rate of 92·0 per 1,000 of the population at this age. The rate was somewhat higher than usual, the average for the preceding ten years being 84·5.

By far the most common cause of death at this period was diseases of the circulatory system, which accounted for slightly over one-fourth of all the deaths. Cerebral apoplexy and hemiplegia were responsible for about one-eighth of the deaths, and malignant diseases for about one-ninth. The deaths from malignant diseases were somewhat above the average. The deaths from accident were considerably above the average, as were also deaths from zymotic diseases. Tuberculosis accounted for rather more deaths than usual. Deaths from pneumonia were more numerous than usual, but, on the other hand, deaths from bronchitis were considerably less numerous.

The percentage fall in the death-rate since the decade of 1861-1870 is for each period as follows, namely, 41 per cent. for the pre-school (including the infant) period, 30 per cent. for the school period, 53 per cent. for the adolescent period, 44 per cent. for the early-mature period, 8 per cent. for the late-mature period, and 3 per cent. for the post-mature period.

All Ages *(Tables II., III., and V.)*.—The death-rate from all causes has already been referred to.

The most common cause of death was, as usual, diseases of the circulatory system, from which there were 412 deaths during the year, as against 395 in the preceding year and 340 in 1912. It is somewhat difficult to account for this rapid increase in the deaths from this group of diseases. The increase is apparent at every age-period, but especially at the later periods.

Diseases of the respiratory system came next, with 340 deaths, as against 363 in the preceding year. Pneumonia accounted for about one-half of these deaths. Nervous diseases accounted for 306 deaths, or almost the same number as in the preceding year, fully one-half of the deaths being due to apoplexy and hemiplegia. From the ordinary zymotic diseases, there were 294 deaths, as against 375 in the preceding year and 209 in 1912. Diphtheria and scarlet fever were the predominant causes of death from zymotics. Tuberculosis caused 255 deaths, of which 171 were due to pulmonary tuberculosis. Diseases of the digestive system accounted for 237 deaths, and malignant diseases for 185 deaths.

The number of deaths from accident and violence was 110, or almost exactly the same number as in the preceding year. There has, however, during the past three years been a notable increase in the deaths from accident and violence, as compared with the average for the previous ten years.

VARIATIONS IN THE MORTALITY FROM SELECTED CAUSES SINCE 1856.

The variations in the mortality from selected causes at all ages since the year 1856—the second year of civil registration—can be conveniently followed in Table VI.

Infectious Diseases.—These, including tuberculosis, are dealt with in greater detail in the succeeding part of the report devoted especially to the morbidity and mortality from zymotics.

Cancer and other Malignant Diseases.—The death-rate has risen from about 56, per 100,000 of population, in the first years of registration to 113 in 1914, and has thus almost exactly doubled itself. The rate remained practically unaltered for the first twenty years of registration, but from 1875 onwards it began to grow fairly rapidly, the rate (127) for 1913 being distinctly the highest on record. The rate for 1914 is the second highest, but is nearly approached by the rate in each of the three years 1907 to 1909.

It is a somewhat curious fact that the mid seventies, which marked the beginning of the modern decline in several diseases, was, on the contrary, associated with the commencement of the increase of malignant diseases. Research in regard to cancer has continued to be actively prosecuted, but no results have yet been achieved of any practical moment in the cure or alleviation of the disease. Surgical procedure still remains practically the only effective method of dealing with malignant growths, and the sooner it is resorted to the more easily can the growths be wholly removed and the return of the disease prevented or greatly delayed. It is of the utmost importance that persons suffering from indications of malignant disease should at once seek competent surgical advice. In many cases such advice is obtained too late to be of real service, and valuable lives, which might, by early extirpation of the disease, have been prolonged in comfort for several years, are thus sacrificed. Medicinal treatment is, as a rule, of no real value. As will be seen from Table V., it is mainly after middle life that malignant disease manifests itself. Thus, up to the age of 25, only two deaths from malignant disease were reported during the year 1914, and only 22 at the ages of 25 to 45. On the other hand, at ages above 45, there were 161 deaths.

Pneumonia is one of the few diseases which, like malignant diseases, has shown during the past fifty years an almost continuous disposition to increase. In the first years of registration, the death-rate from pneumonia was only 58 per 100,000 of population, but by the year 1904 it had risen to 131. From that year until the present time there have been considerable fluctuations in the rate without any definite trend towards increase. The rate for 1914 was 108, and is considerably less than in either of the two preceding years. Indeed, it is the lowest for any year during the past ten years except 1910, when the rate dipped to 93.

Bronchitis, unlike pneumonia, but like phthisis, has, on the whole, been steadily declining as a cause of death during the last fifty years, the death-rate for 1914, which was 75 per 100,000 of population, being the lowest as yet recorded. The rate in 1914 was only slightly above a quarter of the average rate during the ten years 1871-1880.

It is interesting to note that, although in the first thirty years of registration the death-rate from bronchitis fell much more slowly than the death-rate from pulmonary tuberculosis, the rapidity of the decline has, on the whole, been distinctly greater in more recent years than for pulmonary tuberculosis. As will be observed from an examination of Table V., the mortality from bronchitis differs materially from the mortality from pulmonary tuberculosis in respect of the fact that the former almost exclusively affects persons at the two extremes of life—the very young and the aged—while the latter is mainly confined to persons of the mid ages.

TABLE VI.—ABERDEEN.—DEATHS AT ALL AGES FROM SELECTED CAUSES (per 100,000 of population).—*Years* 1856-1914.*

Year.	Small-pox.	Scarlet Fever.	Diphtheria and Croup.	Measles.	Whooping Cough.	Influenza.	Typhus Fever.	Typhoid Fever.	Tuberculous Diseases.		Dis. of Digest. Sys. (incl. Diarrhoea).	Cancer and other Malignant Diseases.	Bronchitis.	Pneumonia.	Dis. of the Circul. Sys. (excl. Cereb. Apopl. and Hemipleg.).
									Phthisis.	Other Tuberculous.					
1914, . . .	1	51	81	4	7	22	0	2	104	51	144	113	75	108	251
1913, . . .	0	19	66	92	27	17	0	5	105	60	135	127	85	121	240
1912, . . .	0	19	21	22	37	12	0	9	95	43	114	109	90	129	266
1911, . . .	0	15	14	74	47	10	0	2	116	48	111	106	88	109	188
1910, . . .	0	4	21	2	10	16	0	1	111	50	105	97	92	93	208
1909, . . .	0	8	20	20	69	17	0	3	110	54	119	111	110	131	192
Average 1909-1913,	0	13	28	42	38	14	0	4	107	51	117	110	93	117	207
1908, . . .	0	9	12	41	38	33	0	0	113	61	117	109	102	125	182
1907, . . .	0	3	12	22	50	14	0	4	117	71	106	110	116	121	161
1906, . . .	0	4	12	44	41	18	0	2	130	70	127	88	106	111	159
1905, . . .	0	7	6	21	21	21	8	2	127	62	149	90	129	131	173
1904, . . .	0	13	7	59	93	8	5	2	124	81	163	101	134	131	180
Average 1904-1908,	0	7	10	37	49	19	2·6	2·0	122	69	132	100	117	124	171
,, 1901-1905,	0·1	8	9	41	47	20	2·6	3·6	138	69	162	87	145	125	179
,, 1896-1900,	0	23	18	35	53	29	0·2	9	167	70	210	87	172	109	167
,, 1891-1895,	0·4	21	22	63	52	56	1·0	10	181	72	190	81	210	100	156
,, 1886-1890,	0·8	14	10	80	66	9	1·4	15	184	67	202	68	216	100	175
,, 1881-1885,	0·2	13	15	36	67	1	6	13	204	74	185	69	251	82	159
,, 1876-1880,	0·6	35	30	28	66	2	19	29	223	101	194	61	286	72	146
,, 1871-1875	48	68	30	53	68	5	20	35	243	107	214	56	281	60	136
,, 1866-1870,	3·6	71	5	50	62	8	62	49	298	130	259	59	238	70	122
,, 1861-1865,	36	93	49	51	62	12	176		274	128	280	57	220	59	122
,, 1856-1860,	40	118	54	70	69	12	109		322	179	203	56	182	58	111

* Corrected for transferred deaths in 1904 and subsequent years.

Diseases of the Digestive System gave, during the year, a death-rate of 144 per 100,000 of population, which is the highest since 1905. There has been a steady increase of this rate since 1910, when it was 105, but within the last ten years there have been years with still higher rates, as, for example, 1904, with 163, and 1905, with 149. The increase in 1914, as compared with the average for the preceding ten years, has been confined to persons under 45 years of age.

Diseases of the Circulatory System.—The death-rate from these diseases was 251 per 100,000 of the population, and is the highest on record since registration began. It has risen rapidly since 1911, when the rate was 188. In 1856-1860, the average annual rate was only 111.

It is difficult to account for the rapid increase in the last few years, but the general increase since the commencement of registration is probably in part due to the increasing proportion of the population surviving to the later ages, in which circulatory diseases always take a prominent place among the causes of death, owing to the slow degeneration, so commonly met with, in the walls of the blood vessels of persons beyond middle life.

MORBIDITY AND MORTALITY FROM ZYMOTICS.

(Tables VI., VII., VIII., and IX.)

Table VI. gives the death-rate from each of the principal zymotics since the commencement of registration. In Table VII., the number of cases and deaths for each disease is stated for the successive months of the year. Table VIII. shows the distribution of the sicknesses and deaths from each disease in relation to the wards of the City, and also classifies the cases according to age-periods. In Table IX., the cases and deaths, together with the case-mortality, or percentage of deaths to sicknesses, are supplied for 1914 and for each of the preceding ten years, as also the averages for the ten years 1894-1903.

The notification of infectious diseases was first made compulsory in Aberdeen in 1881, under a local Act. After the passing of the Infectious Disease (Notification) Act of 1889, the general Act was adopted by the Municipality, chiefly for the purpose of obtaining dual notification by the doctor and householder. Measles and whooping cough, which had been notifiable under the local Act of 1881, were added, by resolution of the Town Council, to the list of notifiable diseases contained in the Act of 1889, but in 1903 the notification of these two diseases was discontinued on a special report from myself, in answer to a remit from the Town Council. The main reasons that weighed with the Council, in taking this step, were the considerable annual expenditure on the fees for the notification of these diseases, amounting on an average to about £400 yearly, conjoined with the apparent hopelessness, at least in a large town, of delaying the onset or staying the progress of an epidemic of measles or whooping cough, and the apparently small advantage otherwise in saving life among the infant cases. It was also felt that, without a great increase in hospital accommodation, it was impossible to offer the advantages of hospital treatment to more than a small fraction of the cases, as, in an ordinary epidemic, the cases occurred in large numbers within a very short period. Since 1903, the principal source of information regarding cases of these diseases, apart from the death registers of the registrars, has been the information supplied to the Health Department, under an arrangement with the School Board, by the attendance officers of the Board, who are provided by the Health Department with special forms for the purpose. The notification of these diseases is, therefore, now limited and imperfect as compared with the years of compulsory notification, but as the deaths remain, of course, as fully certified as before, the proportion of deaths to cases has become unduly heightened since 1903 and gives no certain indication of the real case-mortality.

More recently, certain other diseases have been added to the list of notifiable diseases under the Act. These are epidemic cerebro-spinal meningitis, which was added in 1908; and acute poliomyelitis (or infantile paralysis) and ophthalmia neonatorum, which were added in May, 1913.

In 1914, chicken-pox was also made temporarily notifiable for a period of one year, commencing 29th October. This action was taken on the recommendation of the Local Government Board with the intention of making it more certain that cases of small-pox might not escape the attention of the Local Authorities on account of a possible mistake in diagnosis, as between chicken-pox and small-pox, by the medical attendant. The commencement of the War made it desirable that all reasonable precautions in this direction should be taken.

Cases of pulmonary tuberculosis and other forms of tuberculosis are also now notifiable, not under the Notification Act but under special regulations of the Local Government Board, in virtue of powers contained in the Public Health Act.

During the year 1914, the total number of zymotic cases notified under the Notification Act was 3,746. This does not include 853 cases of tuberculosis notified under the regulations of the Local Government Board, nor 185 cases of measles and whooping cough intimated by school attendance officers and others. The total cases thus notified or made known to the Health Department were 4,784—a number equivalent to about 2·9 per cent. of the whole population. The total number of cases similarly notified or intimated in the preceding year was 6,509, equal to 4·0 per cent. of the population.

Two of the common zymotics exhibited an exceptionally high prevalence during the year, namely, diphtheria and scarlet fever.

The deaths from zymotic diseases amounted to 237, and were above the average (193) for the preceding ten years. These figures do not include the deaths from tuberculous diseases.

Scarlet Fever.—The City has been unfortunate in suffering from a continuously high prevalence of this disease since the commencement of 1911, the number of cases (1,552) during the past year being the second highest on record for any year since notification began. In 1896, the year with the highest number, there were

Table VII.—Progress of certain Infectious Diseases during the Twelve Months of Year 1914.

(Not corrected for transferred deaths.)

Disease.		1914.												Whole Year.
		January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.	
A. Notifiable.														
Small pox	Cases	...	4	2	...	...	..	...	...	...	...	...	...	**6**
	Deaths	...	...	*1*	...	.	..	...	...	...	...	...	...	*1*
Scarlet Fever	Cases	130	91	87	57	72	74	50	97	223	288	222	161	**1552**
	Deaths	*11*	*2*	*3*	*1*	*2*	*1*	*2*	*4*	*6*	*17*	*22*	*12*	*83*
Diphtheria	Cases	251	201	125	100	82	78	90	124	134	173	140	129	**1627**
	Deaths	*16*	*18*	*9*	*6*	*6*	*8*	*3*	*3*	*13*	*22*	*13*	*15*	*132*
‡Typhoid Fever	Cases	2	...	2	2	2	...	...	2	2	1	...	2	**15**
	Deaths	..	*1*	...	...	..	...	...	...	*1*	...	..	*1*	*3*
Typhus Fever	Cases	...	...	...	...	...	...	...	..	..	. .	...	...	...
	Deaths	...	...	...	...	...	..	...	...	...	. .	...	...	...
Erysipelas	Cases	38	26	47	30	26	26	19	32	32	49	28	42	**395**
	Deaths	...	...	*1*	*4*	*1*	*1*	...	*1*	...	*3*	*1*	*2*	*14*
Puerperal Fever	Cases	1	3	1	2	1	3	1	2	1	2	2	5	**24**
	Deaths	*1*	*3*	*1*	*1*	*1*	*2*	*1*	*1*	*2*	*1*	...	*1*	*15*
Epidemic Cerebro-Spinal Meningitis	Cases	...	...	...	...	...	...	...	...	...	...	...	1	**1**
	Deaths	...	...	...	...	..	...	...	...	...	...	...	*1*	*1*
Acute Poliomyelitis	Cases	1	..	...	...	...	...	...	1	...	...	...	...	**2**
	Deaths	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthal. Neonatorum—Cases		4	2	1	5	6	2	4	5	3	6	4	5	**47**
Tuberculous Disease—														
*(*a*) Pulmonary	Cases	37	39	51	73	61	42	27	27	46	55	37	51	**546**
	Deaths	*10*	*7*	*23*	*21*	*16*	*19*	*9*	*12*	*13*	*16*	*13*	*18*	*177*
(*b*) Other	Cases	32	12	28	21	39	25	40	16	20	18	36	20	**307**
	Deaths	*7*	*12*	*9*	*6*	*11*	*10*	*5*	*7*	*5*	*4*	*11*	*2*	*89*
B. Not Notifiable.														
§Measles	Cases	5	6	3	1	4	...	..	2	1	6	17	24	**69**
	Deaths	*1*	...	...	...	...	...	...	*1*	...	*1*	*2*	*1*	*6*
§Whooping Cough	Cases	10	11	13	9	13	6	..	4	11	4	11	24	**116**
	Deaths	*1*	...	*2*	*3*	*2*	*1*	...	*1*	*1*	*1*	...	...	*12*
Total	Cases	511	395	360	300	306	256	231	312	473	602	497	464	**4707**
	Deaths	*47*	*43*	*49*	*42*	*39*	*42*	*20*	*30*	*41*	*65*	*62*	*53*	*533*
Influenza	*Deaths*	*7*	*1*	*7*	*5*	*2*	*4*	*2*	*6*	*3*	*1*	*3*	*2*	*37*
Pneumonia	*Deaths*	*18*	*20*	*22*	*20*	*14*	*11*	*6*	*15*	*7*	*11*	*17*	*17*	*178*
Bronchitis	*Deaths*	*26*	*11*	*14*	*16*	*11*	*11*	*5*	*6*	*4*	*8*	*10*	*11*	*133*

* Notification, previously voluntary, became compulsory, for Pulm. Tub., 1st August, 1912, and Other Tub., 1st July, 1914.

§ Compulsory notification ceased February, 1903.

‡ Including Para typhoid.

TABLE VIII.—CASES OF CERTAIN INFECTIOUS DISEASES NOTIFIED OR DISCOVERED—YEAR 1914.

(Not corrected for transferred deaths.)

DISEASE.		No. of Cases at various Age-Periods.					All Ages.	Cases and Deaths per 10,000 of Population in each Ward of City.*										
		Under 5 years	5-15 years	15-25 years	25-45 years	45+ years		Woodside.	St. Machar.	St. Andrew's.	St. Clement's.	Greyfriars.	St. Nicholas.	Rosemount.	Rubislaw.	Ruthrieston.	Ferryhill.	Torry.
Population (in thousands), Census 1911		...	...	...	...	...	...	9·4	14·3	18·4	11·4	13·9	15·3	17·5	20·2	16·9	15·2	11·4
A. Notifiable.																		
Small-pox	Cases	...	...	2	1	3	6	...	...	...	...	4	...	...	..	...	0·7	...
	Deaths	...	...	...	...	*1*	*1*	...	...	...	...	*0·7*	...	...	...	...	...	...
Scarlet Fever	Cases	395	901	168	74	14	1552	200	147	104	71	53	60	93	63	108	76	113
	Deaths	*32*	*40*	*6*	*4*	*1*	*83*	*9*	*6*	*9*	*7*	*4*	*5*	*6*	*2*	*5*	*0·7*	*4*
Diphtheria......	Cases	473	732	269	141	12	1627	82	110	105	111	68	105	104	81	95	130	100
	Deaths	*76*	*51*	*2*	*3*	...	*132*	*5*	*7*	*10*	*10*	*12*	*9*	*6*	*7*	*2*	*12*	*9*
‡Typhoid Fever	Cases	...	5	2	7	1	15	...	...	1	0·9	1	0·7	0·6	1	2	...	2
	Deaths	...	*1*	...	*1*	*1*	*3*	...	...	...	...	*0·7*	...	...	...	*0·6*	...	*0·9*
Typhus Fever	Cases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Deaths	...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...
Erysipelas	Cases	12	34	53	135	161	395	31	16	24	35	20	35	34	14	17	22	24
	Deaths	*1*	...	*5*	...	*8*	*14*	*1*	*0·7*	*0·5*	...	*1*	*2*	*2*	...	...	...	*3*
Puerperal Fever	Cases	...	...	5	19	...	24	2	...	4	2	0·7	3	...	...	2	0·7	2
	Deaths	...	...	*4*	*11*	...	*15*	*2*	...	*3*	...	...	*2*	...	...	*2*	...	*2*
Epidemic Cerebro Spinal Meningitis	Cases	...	...	1	...	...	1	...	...	...	...	...	0·7	...	...	...	...	...
	Deaths	...	...	*1*	...	...	*1*	...	...	...	...	...	*0·7*	...	...	...	...	...
Acute Poliomyelitis	Cases	1	1	...	...	..	2	...	...	...	0 9	0·7	...	...	...	..	...	...
	Deaths	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum	Cases	47	...	...	...	...	47	...	2	5	7	4	3	4	1	...	3	1
†Tuberculous Disease—																		
(*a*) Pulmonary	Cases	22	143	108	185	88	546	24	37	41	37	55	42	23	21	30	35	24
	Deaths	*6*	*9*	*40*	*74*	*48*	*177*	*12*	*13*	*12*	*8*	*15*	*16*	*15*	*4*	*5*	*12*	*8*
(*b*) Other	Cases	87	146	44	20	10	307	24	21	25	16	27	18	20	10	18	13	16
	Deaths	*41*	*20*	*9*	*11*	*8*	*89*	*3*	*5*	*10*	*7*	*9*	*4*	*5*	*1*	*5*	*4*	*5*
B. Not Notifiable.																		
§Measles	Cases	30	31	8	.	...	69	...	0·7	3	4	3	4	5	2	2	1	27
	Deaths	*6*	...	...	...	..	*6*	...	...	...	...	...	...	*1*	*0·5*	...	...	*3*
§Whooping Cough	Cases	56	60	...	...	...	116	1	3	7	2	6	7	6	2	3	26	17
	Deaths	*12*	..	...	..	...	*12*	...	...	*1*	...	...	*0·7*	*1*	*0·5*	*0·6*	*1*	*3*
Total	Cases	1123	2053	660	582	289	4707	365	337	320	286	242	280	289	196	276	307	326
	Deaths	*174*	*121*	*67*	*104*	*67*	*533*	*32*	*31*	*45*	*32*	*42*	*39*	*37*	*17*	*21*	*31*	*37*
Influenza	*Deaths*	*5*	*1*	*4*	*1*	*26*	*37*	*1*	*2*	*2*	*0·9*	*1*	*4*	*5*	*1*	*1*	*3*	*2*
Pneumonia	*Deaths*	*68*	*8*	*14*	*24*	*64*	*178*	*7*	*8*	*14*	*16*	*15*	*12*	*9*	*9*	*11*	*10*	*9*
Bronchitis	*Deaths*	*42*	...	...	*5*	*86*	*133*	*5*	*9*	*4*	*7*	*16*	*16*	*9*	*3*	*8*	*5*	*8*

* Deaths occurring in Hospitals are assigned to the Ward of the City from which the cases were originally removed.
† Notification, previously voluntary, became compulsory for Pulm. Tub., 1st August, 1912, and for Other Tub., 1st July, 1914.
‡ Including Para-typhoid. § Compulsory notification of these diseases ceased February, 1903.

1,676 cases. During the past four years—1911 to 1914, inclusive—there have been 5,021 cases.

The case-mortality, or deaths per 100 cases, has also, unhappily, been considerably higher during this prolonged epidemic than in the immediately preceding years, being 3·3, as against an average of 1·1 for the preceding four years; but these earlier years were characterised by an exceptionally mild type of scarlet fever. The average case-mortality during the ten years 1894-1903 was 3·6. The case-mortality for the year 1914, taken by itself, is one of the highest for several years, being 5·3. There were 83 deaths from scarlet fever during the year.

As usual, the cases were mainly confined to children of the pre-school and school ages, the mortality being highest at the pre-school age-period, where it amounted to fully 8 per cent. of the cases. At the school age-period and later periods, it ran from 4 to 5 per cent.

The cases were distributed over the whole City, but were distinctly most numerous in the Woodside and St. Machar wards, and least numerous in the Greyfriars, St. Nicholas, and Rubislaw wards.

Scarlet fever was most prevalent in the months of September, October, and November, and least prevalent in July, the cases in October being nearly six times as numerous as those in July.

Diphtheria, which was characterised by quite an exceptional prevalence in 1913, when there were 2,062 cases—an unprecedented number in any year since the commencement of compulsory notification—showed a somewhat diminished prevalence during 1914, when there were 1,627 cases. During the two years of 1913 and 1914, there were as many cases of diphtheria in the City as in the preceding fourteen years. There has been a steady growth of cases since 1907, when there were 196 cases, but the growth was slow until 1911. The cause of this large increase has not been traced. As already stated in preceding reports, it was apparently not due to any change in the school conditions of the children, and was not more prevalent in one type of school than another. Such precautions as appeared to be desirable for the purpose of preventing the spread of the disease by school contact were undertaken by the School Board, after consultation between the School Medical Officer and myself. Among other precautions, bubble fountains were introduced for drinking purposes, in place of common drinking jugs.

In order to discover possible diphtheria carriers and such cases in infected households as had not been recognised on account of the absence of clinical symptoms, brushings of the throat and nose, for bacteriological examination, were taken of a very large proportion of the inmates of the houses in which definite cases had been notified. These brushings gave a positive finding bacteriologically in 6·4 per cent. of the total cases thus examined in 1914. The proportion was somewhat higher among the younger than among the older inmates. Thus, among children under five years of age, the proportion of positive brushings was 7·4 per cent., and of children between the ages of five to fifteen, 7·0 per cent. At ages beyond fifteen, it was 4·8 per cent. In every instance where a positive result was obtained,

TABLE IX.—MORBIDITY AND MORTALITY OF INFECTIOUS DISEASES DURING EACH YEAR FROM 1904 TO 1914, INCLUSIVE.

(*Not corrected for transferred deaths.*)

DISEASE.		1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	ANNUAL AVERAGE.	
													1904 to 1913.	1894 to 1903.
A. Notifiable.														
Small-pox,	No. of Sicknesses,	6	0	0	0	0	0	0	1	0	0	3	0·4	1·3
	No. of Deaths, ...	1	0	0	0	0	0	0	0	0	0	0	0	0·2
	Percent. of Deaths to Sicknesses,...	16·7	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	0	15·4
Scarlet Fever, ...	No. of Sicknesses,	1552	1110	1102	1257	674	1029	1262	492	151	215	589	788·1	681
	No. of Deaths, ..	83	31	34	25	7	11	17	5	6	11	21	16·8	25
	Percent. of Deaths to Sicknesses,..	5·3	*2·8*	*3·1*	*2·0*	*1·0*	*1·1*	*1·3*	*1·0*	*4·0*	*5·1*	*3·6*	2·1	3·6
Diphtheria,	No. of Sicknesses,	1627	2062	791	356	299	291	280	196	244	166	170	485·5	140
	No. of Deaths, ...	132	111	36	24	37	35	21	19	18	10	12	32·3	23
	Percent. of Deaths to Sicknesses,...	8·1	*5·4*	*4·5*	*6·7*	*12·4*	*12·0*	*7·5*	*9·7*	*7·4*	*6·0*	*7·1*	6·7	16·4
Typhoid Fever (including Para-Typhoid),	No. of Sicknesses,	15	33	120	37	21	34	16	24	16	23	37	36·4	98
	No. of Deaths, ...	3	9	15	4	2	5	0	7	4	4	4	5·4	11
	Percent. of Deaths to Sicknesses,..	20·0	*27·3*	*12·5*	*10·8*	*9·5*	*14·7*	*0*	*29·2*	*25·0*	*17·4*	*10·8*	14·8	11·2
Typhus Fever, ...	No. of Sicknesses,	0	0	0	3	0	0	0	0	0	98	34	13·5	1·1
	No. of Deaths, ...	0	0	0	0	0	0	0	0	0	14	9	2·3	0·2
	Percent. of Deaths to Sicknesses,..	0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*14·3*	*26·5*	17·0	18·2
B. Not Notifiable.														
Measles,* ...	No. of Sicknesses,	69	1559	395	5232	51	680	1346	453	2093	370	1913	1408·2	2708
	No. of Deaths, ..	6	149	39	121	4	33	66	36	72	33	95	64·8	70
	Percent. of Deaths to Sicknesses,..	8·7	*9·6*	*9·9*	*2·3*	*7·8*	*4·9*	*4·9*	*7·9*	*3·4*	*8·9*	*5·0*	4·6	2·6
Whooping* Cough, ...	No. of Sicknesses,	116	678	930	1367	234	1104	713	669	840	232	1696	846·3	1765
	No. of Deaths, ...	12	45	61	77	18	113	64	83	66	34	150	71·1	78
	Percent. of Deaths to Sicknesses,	10·3	*6·6*	*6·6*	*5·6*	*7·7*	*10·2*	*9·0*	*12·4*	*7·9*	*14·7*	*8·8*	8·4	4·4
Totals, ...	No. of Sicknesses,	3385	5442	3338	8252	1279	3138	3617	1835	3344	1104	4442	3578·4	5395
	No. of Deaths, ...	237	345	185	251	68	197	168	150	166	106	291	192·7	207
	Percent. of Deaths to Sicknesses,...	7·0	6·3	5·6	3·0	5·3	6·3	4·6	8·3	5·0	9·6	6·6	5·4	3·8

* Notification compulsory previous to 1903.

information was at once sent to the parents and to the medical attendant. If the case presented no clinical symptoms, the patient was not removed to hospital, but was not allowed to attend school or to carry on employment if the employment was connected with the handling of foodstuffs or of clothing. School children were not allowed to go outside, and the parents were asked to isolate them as far as convenient and to see that they were supplied with a separate set of eating utensils. This last advice was applicable to cases of all ages. Swabbings were also taken in several instances of the children in school classes in which a definite case of diphtheria had occurred, and the same precautionary measures were taken where a positive finding was obtained as with household contacts.

The cases of diphtheria were, like those of scarlet fever, distributed throughout the City. The ward with distinctly the highest prevalence was Ferryhill—a ward with a mixed population as regards social classes, and embracing a considerable number of better-class residences, while the ward with the lowest prevalence was Greyfriars, which, of all the wards of the City, contains perhaps the largest proportion of the poorer working classes. On the whole, the distribution of the diphtheria cases throughout the City was rather more even than the distribution of the scarlet fever cases.

As regards the distribution of the disease throughout the months of the year, it was highest in January, with 251 cases, and gradually fell to 78 in June, then subsequently rose to 173 in October, and again began to fall, reaching 129 in December.

The case-mortality for the year was 8·1 per cent., as compared with 5·4 for the preceding year, and an average of 6·7 for the preceding ten years. The case-mortality was much higher in the last three months of the year than in the earlier months. In the last quarter it averaged 11 per cent. The case-mortality was largely influenced by the age of the patient, being as high as 16 per cent. among children under five years of age. At the school age-period (5 to 15 years), it was 7 per cent., and at the adolescent period (15 to 25 years), it was under 1 per cent. At later ages, where, however, the cases were very few, it was about 3 per cent.

As has been the practice in Aberdeen since 1907, antitoxin was supplied gratuitously for the treatment of private cases, and a sterilised syringe was at the same time lent to those practitioners desiring it. As usual, however, not many practitioners took advantage of these facilities, for, during the year, in spite of 1,627 cases having been reported, antitoxin was applied for in only 66 cases. In only 2 per cent. of the cases admitted to the City Hospital had antitoxin been administered previous to admission.

Of the 1,627 cases notified during the year, 1,473—or nearly 91 per cent.—were removed to the City Hospital.

Typhoid Fever.—The number of cases of this disease reported during the year was smaller than in any preceding year since notification began in 1881. The years with the next lowest number were 1906 and 1908, with 16 cases each, followed by 1910, with 21 cases.

The 15 cases were distributed over eight of the eleven wards of the City, and had, therefore, no localised character. In two instances, there were two cases in one household, but in both instances the second case in the household had been apparently infected by the first case.

Two of the 15 cases occurred in soldiers. In one of these, the soldier had been quite recently recruited, and was found, on subsequent inquiry, to have been infected by his wife, who was laid down with an illness which later on proved definitely to be typhoid. His home was in a town in the Scottish midlands. This case possesses some little interest as being one in which the infection of the excreta was difficult to remove, although all the usual means had been employed. Eventually, however, what appeared to be an uninfected condition of the excreta was arrived at after a prolonged stay in hospital, and the patient was discharged from hospital and allowed to resume duty after a few weeks' furlough. But about a month later, while stationed on military duty in the vicinity of Aberdeen, he developed bladder irritation, and his urine was again examined and found to contain the typhoid bacillus. He was once more removed to hospital and treated there for some weeks with the usual urinary disinfectants, but without satisfactory results. The Military Authorities resolved accordingly to grant the patient his discharge from the Army.

The second soldier case was that of a corporal who had been wounded at the front and was invalided to an Aberdeen Military Hospital, but about five days after his arrival in the City he developed symptoms suggestive of typhoid and was removed to the City Hospital. The further progress of the case and the bacteriological examination confirmed the diagnosis. This patient made a good recovery, and was able to return to military service.

These two cases may be regarded as having been infected from some source outside the City. This was certainly true of a third case—that of a lady who had come to the City from New Orleans, where there was reported to be an epidemic of typhoid, and where she had probably been infected. She was practically convalescent from the disease when the case was notified to the Health Department.

As regards the distribution of the typhoid cases in respect of season, they were mainly confined to the spring months and to the autumn months.

As to the mortality, 3 of the cases ended fatally. One of the fatal cases was in a boy of the school age-period, and the remaining 2 deaths were among persons above 25 years of age.

Paratyphoid Fever.—There were no cases, if one case of typhoid is excluded which was found, after admission to hospital, to be definitely infected with paratyphoid as well as typhoid bacilli.

Typhus Fever.—There were no cases of this disease during the year. With the exception of 3 cases in 1911, all of which were confined to one family, there have been no cases of typhus in Aberdeen since 1905.

Small-pox.—After a sequence of six years without a single case of small-pox, a small outbreak of 6 cases occurred early in 1914. One of the cases ended fatally.

The circumstances of the outbreak are these :—The original case was that of a lad whose home was in Aberdeen, and who had been acting as assistant steward on board a vessel which had arrived at Tayport (Dundee) from Almeria, Spain. The boy had taken ill during the voyage, but the attack was so mild and the eruption so slight that the case was not suspected to be one of small-pox by the ship's officers or by the doctor who saw him after he came on to Aberdeen. It was not until the father and a brother, three weeks later, showed symptoms suggestive of small-pox that the real nature of the boy's illness was suspected, and the Public Health Department was consulted by the medical attendant regarding all the cases. The cases were at once visited, when the doctor's suspicions were confirmed, and the illnesses recognised as due to small-pox. The mother of the boy had by this time begun to feel unwell, but definite symptoms of the disease did not develop until after her admission to hospital, whither all the members of the family, both sick and well, were removed. Steps were immediately taken to discover all contacts, and to have them vaccinated or re-vaccinated. As the cases had occurred in a working-class tenement, the whole of the occupants of the tenement were re-vaccinated without serious objection. The attack in the case of the father was distinctly more pronounced than in any of the other members of the family, and his illness was complicated by the previous existence of pulmonary tuberculosis. This patient died seven days after admission to hospital and on the twelfth day of the disease. The case was one of confluent or partially confluent small-pox. His primary vaccination marks were very indistinct. The two boys in the family, including the originator of the outbreak, were aged 18 and 20, and, being nearer to the primary vaccination, the attack was in both cases very mild and the rash very limited. The age of the mother was 46 years. She had never been re-vaccinated, but the scars of the primary vaccination were well marked. The attack in her case, although more severe than that of her boys, was much milder than the attack of her husband, the eruption being quite discrete. She made a good recovery. The other members of the family, consisting of two boys and two girls, ranging in age from two to fifteen years, all of whom had been vaccinated in infancy, escaped being infected in spite of exposure for three weeks to infection from their sailor brother. They had, as already stated, been re-vaccinated when the outbreak came to the knowledge of the Public Health Department, but the re-vaccination was too late to have had any arresting influence on possible infection from their brother during at least the first two weeks after his return home.

Communications with the Medical Officer of Health of Dundee showed that no other case of small-pox was known to have come from the vessel on which the boy was employed. Certain other members of the crew also belonged to Aberdeen, and left the vessel at the same time as the boy, but none of them developed small-pox. All of them showed good infancy vaccination marks.

For a time no other cases occurred, but, unfortunately, full information had not been obtained as to all the contacts in spite of careful inquiry. A neighbouring woman who occupied a small shop in the same street took ill about thirteen days after the removal of the original patients to hospital, and she remained ill for about five days before her case was reported by the medical attendant. Even after this patient took ill, the information received from the patient herself was very defective, as she stated that her only possible contact with the original family was in a visit to the shop by the mother of the family two days before the whole family were removed to the City Hospital. At that time the mother was beginning to feel ill, but it was not until two days after her removal to hospital that the characteristic eruption began to develop. It appeared, therefore, as if it had been possible for small-pox—contrary to the usual belief—to be infectious for three or four days before the eruption appeared. Further investigation, however, showed that the occupant of the shop had herself visited the stricken family on the day before their removal to hospital, and had been for a short time in the house. She had at first forgotten this important fact, and only recalled it, after her admission to hospital, on being reminded by certain members of the original family, who had themselves omitted to include this woman among the names of their visitors when the list was being made up. Had her visit been known then, and had she been re-vaccinated, as were all other known contacts, it is almost certain that her attack of small-pox would not have developed, as vaccination nearly always succeeds in arresting the progress of a small-pox infection, if the vaccination is performed within the three or four days following the exposure to the source of the infection.

The occupant of the shop, after her case was notified, was removed to hospital, where she made a good recovery. She had been well vaccinated in infancy, but had never been re-vaccinated. Her age was 54. All known contacts with this case were promptly re-vaccinated, and the members of her own household were also removed for quarantine purposes to the reception wards of the City Hospital. No other cases developed among these contacts. The shop had been closed and all articles in the shop open to infection destroyed or disinfected.

This, however, was not the last of the cases associated with the outbreak. After the cases had been removed to hospital, I took advantage of the opportunity of their presence in hospital to show them to about a dozen young medical graduates who were at the time undergoing the usual course of training for the Diploma in Public Health. This was done on the day following the admission of the first small-pox cases, and I very carefully warned the students that none of them should enter the small-pox ward who had not been re-vaccinated within the preceding four or five years. Those students who had not been re-vaccinated had the cases demonstrated to them through a window of the ward. Nevertheless, ten days later, one of the students who had entered the small-pox ward began to feel ill with what his medical attendant had first thought was influenza, but five days later a very slight and sparse, but definite, small-pox rash developed. It now emerged on inquiry that this student had never been actually re-vaccinated, although on no fewer than three separate occasions re-vaccination had been tried, but had not held, and the student had considered himself as immune without mentioning the fact to me. He had been well vaccinated in infancy, and the attack of small-pox was so mild that it might easily have escaped recognition had it not been for the history of the exposure to infection. He had visited the small-pox ward only once, and

TABLE X.—ABERDEEN.—NUMBER AND PERCENTAGE OF VACCINATIONS.

		1880.	1890.	1900.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.					
												Registration Districts.					
		Whole City.	Whole City.	Whole City.	Whole City.	Whole City.	Whole City.	Whole City.	Whole City.	Whole City.	Whole City.	St. Nicholas.	St Machar.	Woodside.	Old Aberdeen.	Nigg and Peterculter.	**Whole City.**
Children Born		3613	3447	4807	4710	4504	4450	4492	4300	4028	4152	1510	1705	203	83	371	3872
Died before Vaccination		348	406	568	535	470	511	526	448	478	511	216	179	21	13	38	467
Surviving Children*		3265	3041	4239	4175	4034	3939	3966	3852	3550	3641	1294	1526	182	70	333	3405
A. Successfully Vaccinated	Number†(*a*)	3221	2927	4079	3790	3455	3352	3382	3089	2836	2753	1001	1179	141	54	253	2628
	(*b*)	..	...	...	...	167	110	77	77	104	120	...	...	...	...	...	...
	Percentage of (*a*) + (*b*)	99	96	96	91	90	88	87	82	83	79	77	77	77	77	76	77
B. Insusceptible of Vaccination	Number ...	7	4	5	3	11	9	14	16	21	2	...	3	...	...	...	3
	Percentage	0·2	0·1	0·1	0·07	0·3	0·2	0·4	0·4	0·6	0·05	...	0·2	...	...	...	0·09
C. Not Vaccinated —Statutory Declaration of Conscientious Objection	Number ...	...	...	...	...	84	219	339	362	406	478	154	247	36	11	43	491
	Percentage	...	...	...	...	2·1	5·6	8·5	9·4	11·4	13·1	11·9	16·2	19·8	15·7	12·9	14·4
D. Remainder of Surviving Children	Number ...	37	110	155	382	317	250	156	308	183	288	139	97	5	5	37	283
	Percentage	1·1	3·6	3·7	9·1	7·9	6·3	3·9	8·0	5·2	7·9	10·7	6·4	2·7	7·1	11·1	8·3

* At end of calendar year succeeding year of birth

† (*a*) Number from Registrar-General's Returns; (*b*) Number vaccinated after close of year following year of birth, and up to end of 1914.

then only for about five minutes, but he took part in moving the bedstead of the patient to the window. In common with all the other students who entered the ward, he washed his hands on leaving the ward. He was 27 years of age, and the attempts at re-vaccination had been made at the ages of 14, 21, and 23.

This interesting case emphasises the point that no one should regard himself as sufficiently protected against small-pox in adult life because of re-vaccination having been unsuccessfully, although repeatedly, tried.

It may also be of interest to mention that it has always been the practice in Aberdeen, since the opening of the Municipal Fever Hospital in 1873, to treat small-pox cases in one or other of the pavilions of the hospital. On two occasions, more than twenty years ago, one case of small-pox occurred among the ordinary fever patients in other pavilions. Since these cases, which happened at two slightly separated periods, it has been the invariable practice, on the admission of a small-pox case to the hospital, to inquire at once into the state of vaccination of all the fever patients present in the hospital, and to carry out the vaccination or re-vaccination of all patients who had not as yet been primarily vaccinated, or who were removed more than twelve years from the time of their last vaccination. These vaccinations are not carried out without the consent of the parents, if the patient happens to be a child, but no real difficulty has at any time been experienced in obtaining consent, except in the case of one or two adults, who, however, had good primary vaccination marks, and who were, as far as practicable, accommodated in a part of the hospital well removed from the pavilion containing the small-pox cases.

Since these precautions began to be undertaken, no instance of small-pox infection among the ordinary fever cases has occurred in the hospital.

VACCINATIONS.—Since the passing of the Vaccination (Scotland) Act, 1907, I have, by the authority of the Town Council, been obtaining quarterly from the registrars the number of children regarding whom the parents have declared formally that they had conscientious objection to their vaccination. The accompanying table (Table X.) shows the proportion of vaccinations to surviving children in each year from 1907 to 1913, and, for comparison, in 1880, 1890, 1900, and 1906. The new Act did not come into operation until the later part of 1907, but it provided for a declaration being accepted in regard to children born previously who had so far remained unvaccinated. The numbers given for 1907 and each subsequent year apply, however, only to children born within the specified year. In addition to those included in the table, declarations were made on account of some children born in years previous to 1907.

As has been stated in preceding reports, the figures for vaccinations given by the Registrar-General refer only to the vaccinations that have taken place within the year of birth and the immediately following year. They take no account of primary vaccinations performed at a later age, although these are registered by the local registrars and increase sensibly the proportion of vaccinated children. In the table accompanying this report, these later vaccinations, so far as occurring before the end of 1914, have been included in each of the relative years. For example, in 1912, the successful vaccinations, as stated by the Registrar-General, were 76 per cent., but this has been raised to 79 by the vaccination in 1914 of some of the children born in the year 1912.

The number of conscientious objectors continues to increase year by year. Thus, of the children born in the first year of the new Act, the proportion escaping vaccination because of such objection formally declared amounted to only 2·1 per cent. of the total surviving children at the end of the calendar year following the year of birth. In successive years up to 1913, it had risen through 5·6, 8·5, 9·4, 11·4, and 13·1 per cent. to 14·4 per cent. Or, to state it somewhat differently, while in 1908, the first complete year after the passing of the Act, there were only 219 cases of conscientious objections, they had increased to 478 in 1912, and 491 in 1913.

As was to be expected, the cases, regarding which conscientious objections were taken, were drawn in part from the not inconsiderable number of cases that had surreptitiously been escaping vaccination before the Act passed. Thus, of the children born in 1906—the year immediately preceding the Act—the percentage remaining unaccounted for was 9·1. In 1907, the percentage fell to 7·9, in 1908, to 6·3, and in 1909, to 3·9. But more recently the proportion of such children has been increasing, notwithstanding the uninterrupted increase of the proportion of cases escaping vaccination by statutory declaration. In 1911, the proportion of such cases was 5·2 per cent.; in 1912, 7·9; and in 1913, 8·3. It is evident that, as might have been expected, in view of the fact that vaccination can now be avoided by statutory declaration, registrars are somewhat less vigilant than formerly in tracing unvaccinated children. It is interesting to note that in 1880 only 1·1 per cent. of the children born in that year escaped vaccination, while in 1913 the percentage so escaping, partly legitimately and partly illegitimately, was 22·7. Fully one-fifth of the infants born in the City are now remaining unvaccinated, and the proportion, as has been remarked, is constantly growing.

Aberdeen is, unfortunately, not exceptional in the steady diminution of unvaccinated infants. In some places the proportion of such infants exceeds considerably that in Aberdeen. Thus, of the children born in 1913—the latest year for which returns are available—the percentage escaping vaccination in Glasgow was 37, in Dundee, 68, and in Edinburgh, 21, as compared with 19 in Aberdeen in that year. But the largest proportion of unvaccinated children is being met with in the rural, and especially in the insular, districts. In Shetland, for example, the proportion was so high as 86 per cent.

It is evident from such figures that, if nothing occurs to check the increasing disregard of vaccination, the whole population of the country will very soon contain a large proportion of persons liable to small-pox, and will, therefore, be under conditions favourable to widespread devastation by this malignant disease should it at any time obtain a substantial footing. This country has so long enjoyed the advantages of infant vaccination and the consequent protection, especially against small-pox in early life, that people are nowadays accustomed to view small-pox as a disease to which only adults are liable. But all experience in the past shows that where infant vaccination is unknown, or is neglected, children take small-pox almost as readily as they take measles, but suffer much more severely than they do from that disease. In a fully vaccinated community, adults are more liable to be attacked by small-pox merely because of the protection afforded by vaccination in infancy becoming gradually reduced, unless such vaccination has been reinforced by a second vaccination when the age of adolescence is reached.

It cannot be too strongly impressed on the popular mind that small-pox is possessed of three characteristics, all of which are not combined in any other zymotic disease, namely, (1) high infectiousness, (2) great severity, with consequent liability to a fatal termination, and (3) permanent disfigurement. Anyone who has seen small-pox in unvaccinated persons, with its highly dangerous and loathsome effects, could not but be convinced that the inconvenience of vaccination is as nothing when compared with the grave risks of small-pox.

The disfiguring effects of a possible attack of small-pox in a child who has remained unvaccinated because of the objections of the parents ought not to be lightly viewed. I have never known such a case in which, when the child became conscious of the life-long handicap of an indelibly scarred face, there was not a deep feeling of regret, if not of resentment, that the parents had failed to secure for the person in infancy the protection enjoined by the law against an attack of small-pox.

Measles.—As has already been mentioned, measles is no longer compulsorily notifiable, but a large proportion of the cases is brought to the knowledge of the Public Health Department by the visits of the attendance officers of the School Board to the homes of the children who are absent from school. The number of cases of the disease thus intimated to the Health Department during the year was 69. In the preceding year it was as high as 1,559. The number of deaths in 1914 was 6, giving a case-mortality of 8·7 per cent. The case-mortality is considerably higher than the average for the years previous to the stoppage of compulsory notification, and suggests that a considerable number of the cases of measles are not known to the Department. At the same time, there is some reason to believe that this is not the whole explanation of the high case-mortality from measles during the past three years, and that it is in a considerable measure to be ascribed to a more severe type of the disease.

Of the 69 cases of measles, 30 were of children under five years of age, and the remainder were above that age. The fatal cases were wholly confined to the children of the earlier age-period. The very high mortality from measles among young children, especially of children under two or three years of age, has for many years been emphasised in these reports.

About two-thirds of the cases occurred in the last two months of the year, but each of the other months had one or more cases, except the months of June and July, which were free from any reported cases.

Cases were met with in all the wards of the town except the Woodside ward, but they were more numerous in the Torry ward than in any other single ward.

Every known case of the disease, except cases occurring in the larger houses, were visited by an Inspector from the Health Department, and, in pursuance of the practice begun about twenty-five years ago, a printed set of instructions was given to the parents, and their attention directed to the great seriousness of measles to young children and to the need for special care.

Whooping Cough, which, like measles, had assumed epidemic proportions in the preceding year, showed a large reduction of cases in 1914, only 116 cases having come to the knowledge of the Department, as against 678 cases in 1913. The same qualification is applicable to whooping cough as to measles, in respect of the effect of the discontinuance of compulsory notification.

There were 12 deaths, giving a case-mortality of 10·3 per cent., which is considerably higher than in any of the preceding four years, and is more than twice the average for the years prior to the stoppage of compulsory notification. There is here a distinct suggestion that the cases known to the Department did not include all the cases that actually occurred. Of the 116 cases, 56 were under five years of age and 60 were above; but the 12 deaths were completely limited, as with measles, to the younger group of patients.

Cases occurred in all the wards of the City, but were decidedly more numerous in Torry and Ferryhill than in any other ward.

Cases arose in all the months of the year, except July, and were most numerous in December.

Erysipelas again showed a considerable increase during the year, 395 cases having been reported, as against 229 in the preceding year and 133 in 1912. There has, therefore, been a large increase of cases during the past two years. The deaths during 1914 were also considerably increased, both absolutely and in proportion to the reported sicknesses. There were 14 deaths, as against 4 in the preceding year, and only 1 in 1912, 3 in 1911, and 2 in 1910.

The cases were fairly equally distributed throughout the various wards, but were most numerous in certain of the somewhat poorer wards and fewest in the wards occupied by the better classes, such as Rubislaw.

A considerable number of cases was met with in every month of the year, but the cases were, on the whole, most numerous in late autumn and early winter.

The more serious cases of erysipelas, occurring in poorer households in which proper attention cannot be obtained, were, as in previous years, removed to the City Hospital for treatment.

Puerperal Fever.—Like erysipelas, this disease was, unfortunately, much more prevalent during the past year than in any of the preceding ten years, the number of cases reported or discovered being 24, as against 10 in the preceding year, and an average of 10 for the preceding ten years. The deaths amounted to 15, which represents a somewhat higher case-mortality than the average. All of the cases, except 4, were duly notified by the medical attendant. The 4 cases were ascertained only after examining the death certificate, the terms of which suggested the probability of puerperal sepsis—a probability which was confirmed on consultation with the medical attendant. In order to assist in the discovery of all possible cases of puerperal sepsis, all deaths of women occurring within four weeks after childbirth have, for many years, under arrangements with the local registrars, been immediately notified to the Health Department.

Of the 24 cases of puerperal fever, 5 were of women under twenty-five years of age, and the remaining 19 were of women above that age. The usual precautions regarding the disinfection of the attendant midwife or nurse and of their clothing, were taken.

The cases of the disease were fairly evenly distributed throughout the year, but were slightly more numerous in the last months of the year than in the other months. They were not so evenly distributed over the City. In three of the wards there were no cases. The ward with the largest number of cases was St. Andrews, in which there were 8 cases.

As to the association of the cases with individual doctors or midwives or nurses, two doctors had each three cases. One of these doctors had one case in April and two in December, and the cases of the other doctor occurred in March, October, and December. Two doctors had each two cases—in November and December for one of the doctors, and in June and December for the other. There were two midwives with two cases each—in June and December for one midwife, and in October and December for the other. There was no single nurse associated with more than one case.

Inquiries into all these instances of multiple association did not suggest that infection had been conveyed from one patient to another. This is entirely satisfactory.

Acute Poliomyelitis.—The compulsory notification of this disease had begun about the middle of the preceding year, and, during the notifiable period of that year, 7 cases had been reported, but practically all of them were notified almost immediately after the notification came into force, the majority having been ill for a considerable time previously. They also included 3 cases which were undergoing treatment in the Royal Infirmary, and which had been admitted from the country.

During 1914, only 2 cases were notified—one case, a child of ten years, being notified in January, and the other case, a child of two years, being notified in August. One belonged to St. Clement's ward and the other to Greyfriars ward—both essentially working-class wards.

There were no deaths.

Ophthalmia Neonatorum.—The compulsory notification of this disease was resolved upon at the same time as the notification of acute poliomyelitis, and came into force on the same date. The number of cases notified during 1914 was 47, as compared with 41 in the notifiable period (about seven and a half months) of the preceding year.

This disease, which is usually due to venereal infection at birth, and may lead to permanent impairment and even loss of sight, if not immediately treated, was, as judged by notifications, most abundant in St. Clement's ward, with 7 cases per 10,000 of the population. This is the ward most closely associated with the harbour and docks. The immediately adjacent ward of St. Andrew's came next, with 5 cases, followed by Greyfriars and Rosemount with 4 each, St. Nicholas and Ferryhill with 3 each, St. Machar with 2, and Rubislaw and Torry with 1 each, but the number of notifications is probably a rather defective measure of the real relative proportions of such infections in the various wards.

Each case was visited by a Health Visitor. All the cases recovered without, so far as could be seen, any definite impairment of sight.

Influenza was registered as the cause of 37 deaths during the year, or 10 more than in the preceding year and 14 more than in 1912.

In 6 of the cases, the deceased was under fifteen years of age, and in 26 cases, the deceased was above forty-five years of age.

TUBERCULOUS DISEASE.

(Tables IV., IV.(A), V., VI., VII., VIII., XI., and XI.(A).)

Mortality.—As compared with the preceding year, there was a slight decrease in the deaths from all forms of tuberculosis during 1914, but the deaths were more numerous than in 1912, which year, however, had been distinguished by a very low mortality from tuberculosis—the lowest attained since the commencement of civil registration. The figure for 1914 is the next lowest.

In 1914, the deaths from all forms of tuberculosis numbered 255, as against 269 in 1913, 227 in 1912, and 271 in 1911. The deaths in 1914 are equal to a death-rate of 155 per 100,000 of the population, as compared with 165 in the preceding year, 138 in 1912, and 164 in 1911.

In regard to the deaths from the pulmonary forms of tuberculosis, they amounted to 171, or exactly the same number as in the preceding year. In 1912, the number was 156, and in 1911, 192. This gives for 1914 a death-rate of 104 per 100,000 of the population, which is the second lowest on record, being surpassed only by the rate (95) for 1912. In 1913, the rate was 105, and in 1911, 116.

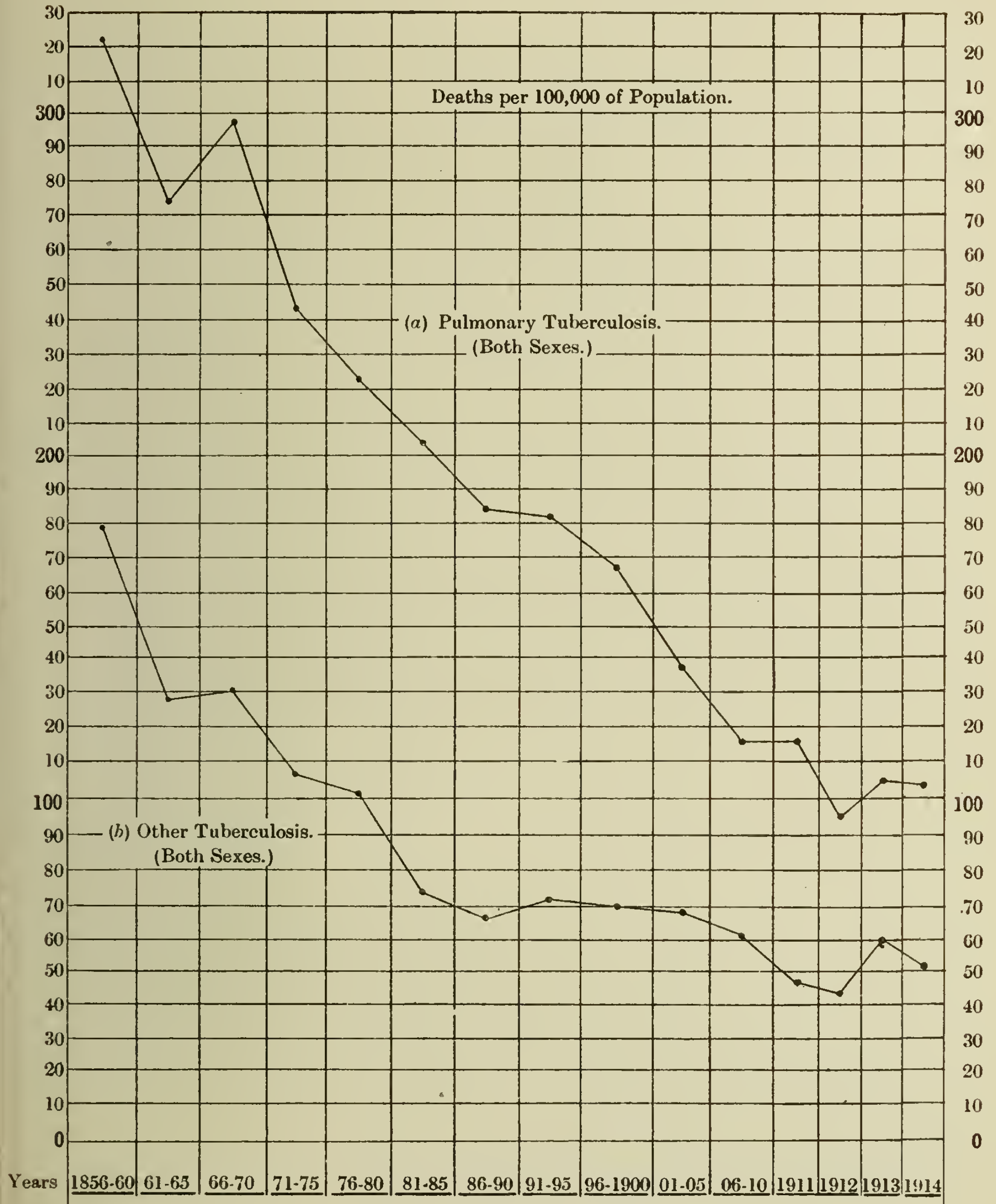
The deaths from other forms of tuberculous disease were 84, and were somewhat under the number (98) for the preceding year. In 1912, they amounted to 71, and in 1911 to 79. The number for 1914 is equivalent to a death-rate of 51 per 100,000 of population, as against 60 for the preceding year and 43 in 1912.

The accompanying chart, as also Table XI., show the great fall in the tuberculosis death-rate during the last fifty to sixty years. The rate is now under a third of what it was when registration began, and this is true both of pulmonary tuberculosis and of the group of other tuberculous diseases.

The rapidity of the decline of the death-rate from pulmonary tuberculosis or phthisis, as represented by the slope of the line in the accompanying diagram,

ABERDEEN.—TUBERCULOSIS, 1856-1914.—QUINQUENNIAL PERIODS.

ALL AGES. BOTH SEXES.



Years	1856-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-1900	01-05	06-10	1911	1912	1913	1914
(a) PULMONARY TUBERCULOSIS.	322	274	298	243	223	204	184	181	167	138	116	116	95	105	104
(b) OTHER TUBERCULOSIS.	179	128	130	107	101	74	67	72	70	69	61	48	43	60	51

Deaths per 100,000 of Population.

(Corrected for transferred deaths in 1904 and subsequent years.)

TABLE XI.—ABERDEEN.—MORTALITY FROM TUBERCULOSIS IN YEARS 1856-1914,*

Per 100,000 of Population.

PERIOD.	PULMONARY TUBERCULOSIS.			OTHER TUBERCULOUS DISEASES.			ALL TUBERCULOUS DISEASES.		
	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.
1856-60 .	333	312	322	235	135	179	568	447	501
1861-65 .	267	279	274	158	103	128	425	382	402
1866-70 .	295	300	298	170	98	130	465	398	428
1871-75 .	234	250	243	129	89	107	363	339	350
1876-80 .	217	228	223	112	92	101	329	320	324
1881-85 .	189	216	204	90	62	74	279	278	278
1886-90 .	179	188	184	76	60	67	255	248	251
1891-95 .	179	183	181	83	62	72	262	245	253
1896-1900 .	166	168	167	77	64	70	243	232	237
1901-05 .	143	134	138	79	62	69	222	196	207
1906-10 .	119	113	116	74	51	61	193	164	178
1906 . .	118	140	130	89	52	70	211	196	204
1907 . .	123	111	117	81	61	71	204	172	188
1908 . .	131	97	113	80	47	61	211	144	174
1909 . .	112	108	110	62	47	54	174	155	165
1910 . .	112	110	111	54	46	50	166	156	161
1911 . .	137	98	116	52	45	48	189	143	164
1912 . .	104	87	95	49	38	43	153	125	138
1913 . .	126	87	105	52	67	60	178	154	165
1914 . .	124	87	104	59	45	51	183	132	155

*Corrected for transferred deaths in 1904 and subsequent years.

would appear to suggest that it had considerably slackened within the last four years as compared with the immediately preceding years, but it will be observed that these four years are represented individually in the diagram, while the preceding years are shown in quinquennial periods, and that the four years together cover a relatively much wider space than is occupied by each of the preceding quinquennial periods. This has produced an apparent flattening of the mortality curve for these last years. The diagram, however, makes it clear, if there is no error due to change of diagnosis in course of time, that the fall in the death-rate from other forms of tuberculosis was much more rapid in the earlier years of registration than it has been in the later years.

As regards the death-rate from tuberculosis at the various age-periods, reference to Table V. shows that, as compared with the average for the preceding ten years, the rate during 1914 was under the average at every age-period except the latest two periods, or the periods of 45 years upwards.

Notifications.—Voluntary notification (with payment of fee to the medical attendant) of all forms of tuberculosis, which was begun in Aberdeen early in 1911, was placed on a compulsory basis, in so far as concerned pulmonary cases, on August 1st, 1912, under the Public Health (Pulmonary Tuberculosis) Regulations (Scotland), 1912, of the Local Government Board. The same change under a fresh Order took place on 1st July, 1914, in regard to other forms of tuberculosis. The system of paying 2s. 6d. to the medical attendant for certain information regarding each case beyond what is required in the notification form as prescribed by the Local Government Board was continued.

The notifications of all forms of tuberculosis are given in Tables VII. and VIII., in respect of ward and month, and are summarised in Table XI.(A). From these tables it will be seen that 546 cases of pulmonary tuberculosis were notified, and 307 cases of other forms of tuberculosis, making a total of 853 cases. In the preceding year, the corresponding numbers were 455 and 325, with a total of 780, while in 1912, the numbers were 495 and 173, with a total of 668. The number of deaths, as stated in Table VII., is not corrected for transfers, but such correction has been made in Table XI.(A).

The increase during 1914 in the notifications both of pulmonary tuberculosis and of other forms of tuberculosis was mainly at the ages of 5-15. The increase was in part the outcome of the increasing examination of contacts in tuberculous families by the Tuberculosis Medical Officer.

The proportion of notified cases of pulmonary tuberculosis to deaths, after correction for transfers, was during the year 3·2 : 1. In the preceding year, it was 2·7 : 1, and in 1912, it was 3·2 : 1. The corresponding figures for other forms of tuberculosis were 3·7 : 1 in 1914, 3·3 : 1 in 1913, and 2·4 : 1 in 1912.

The largest monthly numbers of notification of cases of pulmonary tuberculosis were in April and May, and the lowest were in July and August. May also gave the largest number of notifications of cases of other forms of tuberculosis, and February the smallest number. The months with the largest number of deaths from pulmonary tuberculosis were distinctly the spring months of March and April, and the month with the fewest number was February.

The cases of pulmonary tuberculosis were relatively most abundant in Greyfriars ward—the ward with the largest proportion of old houses and of the poorer working classes—where the cases amounted to 55 per 10,000 of the population, or exactly the same as in the preceding year. The incidence was lowest in Rubislaw, Rosemount, Torry, and Woodside wards, with 21 to 24 per 10,000. Rubislaw is the most distinctively "west-end" ward, while Torry, with the exception of a very few houses, is the most recently built of the working-class wards. Rosemount has a mixed population so far as concerns the classes, and the houses are, on the whole, comparatively modern. Woodside is mainly a working-class ward, but the ground is open and free from crowding. Other forms of tuberculosis were also most abundant in Greyfriars ward, while the ward with distinctly the lowest incidence was Rubislaw.

Table XI.(A) gives the number of tuberculosis cases notified during 1914, divided into pulmonary and non-pulmonary cases, and arranged according to sex and age-period. It will be observed that, while pulmonary cases were most numerous at the

TABLE XI. (A).—TUBERCULOSIS CASES NOTIFIED IN 1914.

(Corrected for Transfers.)

AGE-PERIOD (Years).	Pulmonary Tuberc.			Other Tuberc.			Total Cases.		Total Deaths.		Percentage of Deaths to Cases at each Age-Period.
	Males.	Females	Both Sexes.	Males	Females	Both Sexes.	For Age-Period.	Per Year of Age-Period.	For Age-Period.	Per Year of Age-Period.	
Under 5 (*5 Years*), .	9	13	22	41	46	87	109	22	42	8	39
5—15 (*10 Years*), .	63	80	143	74	72	146	289	29	28	3	10
15—25 (*10 Years*), .	49	59	108	16	28	44	152	15	49	5	33
25—45 (*20 Years*), .	77	108	185	8	12	20	205	10	82	4	40
45—65 (*20 Years*), .	41	37	78	8	1	9	87	4	46	2	53
65 and above, . .	6	4	10	...	1	1	11	...	8	...	73
ALL AGES, .	245	301	546	147	160	307	853	...	255	...	...
Cases per 100,000 of Sex Population	327	338	333	196	180	187	520	...	...	...	...
Deaths per 100,000 of Sex Population	124	84	104	59	43	51	155	...	...	...	...
Percentage of Deaths to Cases notified .	38	26	31	30	25	27	30	...	...	...	...

age-periods of 5-45, and the non-pulmonary cases at the age-periods of 0-15, all forms of tuberculosis taken together, and estimated per year of age-period, showed on the whole a well-marked declension in prevalence as age advanced, the figures for the successive age-periods being 22, 29, 15, 10, and 4. The corresponding figures for the preceding year were 24, 20, 17, 10, and 4.

It will also be observed that the deaths per year of age-period was highest, with 8 deaths, at the period under 5; then fell to 3 in the period of 5-15, but rose to 5 in the period of 15-25, and subsequently declined to 4 at 25-45 and 2 at 45-65. The corresponding figures, in the same order, for the preceding year were 10, 3, 6, 4, and 2.

As regards the percentage of deaths to cases, this is naturally influenced considerably by the relative completeness of the notification of cases at the different age-periods, but taking the cases as notified and the deaths as registered, the percentage of deaths to cases was not widely different at the three age-periods of 0-5, 15-25, and 25-45, running from 33 to 40 per cent. It was lowest at the 5-15 period, with 10 per cent. At the period of 45-65, it was 53, and at ages of 65 and upwards, it was 73.

It may be noted that the number of deaths at all ages from pulmonary tuberculosis in relation to the number of notified cases was distinctly lower among females than among males, being 26 per cent. as against 38. The corresponding figures for the preceding year were 32 and 44, respectively. The same was true of the non-pulmonary cases, the percentages being 25 and 30. In the preceding year, however, they were 35 and 25, but that year was exceptional in this respect.

It is, of course, to be understood that in any reference to number of deaths in relation to cases notified, the deaths in any one year are, in considerable measure, deaths of cases notified in previous years, and, further, that owing to the admitted incompleteness in the notification of tuberculous cases, which in their earlier stages are difficult to diagnose, the comparison of deaths with cases is subject to considerable qualification, although not altogether without value, when ages and sex are being compared within any one year.

As regards the *site of the disease* in the 307 cases suffering from forms of tuberculosis other than pulmonary, 35 cases (16 males and 19 females) were suffering from abdominal tuberculosis; 36 (19 males and 17 females), from tuberculous meningitis; 60 (33 males and 27 females), from tubercle of bones and joints, including the spine; 160 (71 males and 89 females), from tuberculous glands, mainly cervical; and 16 cases (8 males and 8 females), from generalised and other tuberculosis. As compared with the preceding year, there was a considerable increase of glandular cases, namely, from 121 to 160, and a considerable reduction of abdominal and head and generalised cases, and also to some extent of bone and joint cases. The large increase in glandular cases is probably due in the main to fuller notification.

There were 17 deaths of abdominal cases, 37 of meningitic cases, 8 of cases of bones and joints, 2 cases of glands, and 20 of other cases.

It has to be kept in mind that, while the cases of tuberculosis are classified according to the chief seat of the disease, the tubercle is in very many cases not definitely confined to one organ, although it is often much more manifest clinically and pathologically in one organ or part than in the rest of the body.

Occupations.—The following is a summary of the occupations of the cases notified during the year. The numbers given have, of course, no value as an indication of the relative prevalence of the disease without information as to the number of persons engaged in each occupation. Moreover, even if these numbers were supplied, and they are obtainable from the census, they are in most instances too small to yield reliable statistical conclusions for a single year, but it may be said, speaking generally, that labourers showed, among males, the highest incidence, and that clerks and stonecutters came next.

ABERDEEN.—OCCUPATION OF PERSONS NOTIFIED IN 1914 AS SUFFERING FROM TUBERCULOSIS.

(a) Males.

	Pulmonary	Other.
Children under school age,	14	50
Children at school,	57	65
Labourer,	38	5
Stonecutter or Mason,	15	—
Clerk,	8	2
Engineer,	6	3
Carter,	5	—
Joiner,	4	—
Granite Polisher,	4	—
Boxmaker,	3	1
Warehouseman,	3	1
Motor Car Driver,	3	—
Tailor,	3	—
Barman,	2	2
Fisherman,	2	1
Millworker,	2	1
Fishworker,	2	1
Farm Servant,	2	—
Plumber,	2	—
Hairdresser,	2	—
Teacher,	2	—
Dental Mechanic,	2	—
Soldier,	2	—
Blacksmith,	2	—
Marine Fireman,	2	—
Baker,	1	1

(a) Males—continued.	Pulmonary.	Other.
Butcher,	1	1
Tinsmith,	1	1
Artist, Banker, Boilermaker, Bookbinder, Brassfinisher, Cartwright, Cooper, Dealer, Draper's Salesman, Engineer's Machinist, Fish Buyer, Fish Merchant, Fishmonger, Grocer, Insurance Collector, Irondriller, Ironmonger, Medical Student, Message Boy, Messenger, Metal Dresser, Miner, Musician, Music Dealer, Packer, Painter, Paper Trimmer, Plasterer, Postman, Ragworker, Railway Cleaner, Railway Wayman, Sawmiller, Seaman, Settmaker, Shepherd, Shipwright, Shoemaker, Signalman, Slater, Stonedyker, Tool Grinder (1 each),	42	—
Billposter, Coachman, Combworker, Electric Fitter, Gardener, Hosepipe Weaver, Photographer, Railway Porter, Surveyor (1 each),	—	9
No occupation,	5	2
No information,	8	1
Totals,	245	147

(b) Females.

	Pulmonary.	Other.
Children under school age,	18	53
Children at school,	72	60
Wife,	97	9
Millworker,	17	9
Domestic Servant,	12	4
Laundry Worker,	8	1
Shop Assistant,	6	2
Dressmaker,	4	3
Fishworker,	4	2
Charwoman,	5	—
Clerk or Typist,	4	3
Net Weaver,	3	—
Teacher,	2	1
Student,	2	1
Provision Worker,	2	1
Hawker,	2	—
Glovemaker,	2	—
Boxmaker,	1	1
Combworker,	1	1

(b) Females - continued.	Pulmonary.	Other.
Biscuit Packer, Dairymaid, Envelope Maker, Die Stamper, French Polisher, Nurse, Packer, Paper Cutter, Pedlar, Printer's Reader, Waitress (1 each),	11	—
Message Girl, Photographic Printer, Tailoress (1 each),	—	3
At home or no occupation, ...	26	5
No information, ...	2	1
Totals, ...	301	160

Insured Persons.—The work of the Burgh Insurance Committee in regard to Sanatorium Benefit for tuberculous persons is mainly carried out by the Health Department, as, apart from domiciliary treatment by the panel doctors, the institutional treatment of tuberculous cases and the hygienic supervision of all cases in their homes is undertaken or arranged for by the staff of the Health Department. The Health Department submits a report on the insured cases to each monthly meeting of the Sanatorium Sub-Committee, which is attended by the Tuberculosis Medical Officer. The charge for the treatment of insured tuberculous cases in the City Hospital, which had been fixed at 25s. per week in the preceding year, was raised in January, 1914, after a conference with the Sanatorium Sub-Committee, to 30s. per week.

It may be stated that of the 546 cases of pulmonary tuberculosis notified during the year, 189 were insured persons, and consisted of 123 males and 66 females. The number of insured persons in the preceding year was 184, and consisted of 110 males and 74 females.

The insured cases were, of course, confined to persons above 16 years of age. In this connection it may be stated that of 122 notified non-insured male persons, 46 were above 16, and that of 235 non-insured females, 138 were above 16.

In respect of the total of 307 cases of other forms of tuberculosis notified, 48 were of insured persons, 23 being male and 25 female. Of the 124 non-insured males, 8 were above the age of 16; and of the 135 females, 15 were above this age.

Supervision of Cases.—The arrangements for dealing with tuberculosis during 1914 were on practically the same lines as in 1913. All notified cases, except the few in which the medical attendant intimated that he did not desire visits to be made, were visited by officers of the Public Health Department. Full information was obtained regarding the housing and family and social conditions of each patient, and arrangements made for the admission of suitable cases to sanatorium or hospital treatment, or for their proper isolation and care at home.

Practically every notified case of tuberculosis among the working classes undergoing treatment at home was regularly visited—in a large proportion of cases once a fortnight—by the special Health Visitor who had been appointed for this purpose in 1912, with the assistance of a second Visitor appointed in April, 1914. Their duties have been to see that the arrangements made for the prevention and spread of infection and the preservation of hygienic surroundings of the patients were being attended to. They keep a careful record of their visits on special cards. Each house was also examined by one of the District Sanitary Inspectors, and a full report made of its sanitary condition, with a view to taking such steps for the remedying of defects as the law permitted. A considerable number of defects were thus dealt with, including enclosed beds and unhung window sashes.

All members of the patient's household with any suspicion of the presence of tuberculous disease were examined by the Tuberculosis Medical Officer, and a considerable number of cases not previously notified were thus discovered. Nearly all the notified cases were examined clinically by the Tuberculosis Medical Officer, whose opinion is being freely sought by the medical practitioners. In practically every case, the home was visited by the Tuberculosis Medical Officer with a view to such directions being given to the Health Visitors as might appear to be necessary.

It is distinctly disappointing to find that very few cases of tuberculosis are being reported in the really early stages, in which treatment can be made so much more effective than in the later stages. Very often the patient is late in seeking medical advice. In other cases, the medical attendant would appear to be responsible for the delay. Although the proportion of early stage cases appears to be considerable, judged by the stage stated in the notification of the medical attendant, the stage in reality is not infrequently much more advanced, as disclosed by the examination of the Tuberculosis Medical Officer. Thus, although out of 546 notified cases of pulmonary tuberculosis in 1914, excluding 73 in which the stage was not given in the medical notification, 183 were stated to be in the first stage, 181 in the second stage, and 109 in the third stage, including 14 cases which were notified after death, the Tuberculosis Medical Officer was of opinion, after clinically examining a large proportion of the cases, that only about 1 or 2 in every 10 cases reported to be in the first stage were properly assignable to that stage, and that the remainder were in the second or third stage. Indeed, about 5 out of every 10 were in the third stage. Of those notified as in the second stage, and examined by the Tuberculosis Medical Officer, as many as 4 or 5 out of every 6 were, in his opinion, in the third stage. No doubt these wide differences between the medical practitioner and the Tuberculosis Medical Officer are due in some considerable measure to a misapprehension of the conditions determining the classification into the three stages.

In the preceding year, the number of first stage cases, as notified by the medical attendant, was 182; of second stage cases, 160; and of third stage cases, 68.

So far as one can learn from reports elsewhere, the experience of Aberdeen in respect of the real stage of the cases when notified is not singular. It is undoubtedly true that cases in almost any stage of pulmonary tuberculosis, unless already moribund, may benefit considerably by proper treatment, such as the hygienic treatment available in suitably constructed hospitals or sanatoria, or even in properly arranged homes, but as a rule the benefit in cases of the later stages is not well maintained after the treatment ceases. In too many instances the progress of the disease is only delayed and not really arrested. The really hopeful stage is the first stage, and even then only the most incipient cases of this stage.

It is easy to understand the diffidence which many medical men feel in suggesting a diagnosis of tuberculosis to the patient or the relative if the case is a very early one. There may even be in his mind, if his clinical experience has not been very extensive, more or less lack of complete assurance as to his diagnosis, and there may, excusably, be a belief that the patient and his family may be unduly alarmed at the mention of tubercle. Even where these difficulties are surmounted, there is the still further difficulty of persuading the patient, especially if grown-up and engaged in active work and feeling fairly fit for work, as often happens in quite early stages, to go for a time to a sanatorium. The patient dislikes the notion of being publicly labelled as tuberculous when still feeling fit for work, and is even afraid, if not absolutely convinced of being tuberculous, that he may become infected by consorting with tuberculous patients.

If the paradox may be excused, the only really successful way, on a large scale, of treating tuberculous cases is to begin the treatment before the case can properly be declared to be tuberculous, and when the patient can still be spoken of as only being threatened with tubercle, and may be persuaded to take a prolonged holiday. This is usually not difficult for persons of the better class, as many hygienically arranged institutions, such as hydropathics and spas, are open to them for a pleasant health-giving holiday. Such places are, however, quite beyond the reach of the working classes, who as yet are practically unprovided with such health institutions in which the charges are commensurate with the means of these classes. I have frequently stated, since tuberculosis began to receive the public attention it is now getting, that probably the most successful way of combating it, in addition to the ordinary everyday hygienic measures that make for the improved health of the community, is to provide holiday homes in the country for the working classes.

Size of House and Density of Occupancy.—As regards the relation of cases to size of house and average number of inmates in house, information is given in the accompanying table, which shows that out of the 546 pulmonary cases, 418, or 76 per cent., occurred in houses of three rooms and under. This percentage, as in the preceding year, when the percentage was 75, is almost exactly the same as the percentage of such houses to the total houses in the City, thus showing that, in at least these two years, the proportion of phthisical cases in the smaller houses was not excessive. But some adjustment is required for 32 cases notified from institutions, as no doubt nearly all these cases belonged to the class that would in their own homes, where homes existed, have been occupying the smaller houses. The proportion of the total cases in houses of five rooms and upwards was about 8 per cent. In the preceding year, it was 9 per cent. There were, according to the last census, 14 per cent. of houses of this size in the City.

Female cases predominated over male cases in every class of house.

TUBERCULOSIS.—SIZE OF HOUSE IN RELATION TO NOTIFIED CASES AND REGISTERED DEATHS DURING 1914.

		1 Room.	2 Rooms.	3 Rooms.	4 Rooms.	5 Rooms and up.	Institutional or Not Stated.	Total Cases.
Pulmonary Tuberculosis (Cases)	Male,	5	88	94	24	19	15	**245**
	Female,	16	104	111	31	22	17	**301**
Both Sexes,	Cases,	21	192	205	55	41	32	**546**
	Deaths,	11	62	52	17	18	11	**171**
Average Number of Inmates, including Patient,		2·9	4·7	6·2	6·2	5·9	...	5·2
Other Tuberculosis (Cases)	Male,	4	67	43	14	9	10	**147**
	Female,	8	57	63	18	8	6	**160**
Both Sexes,	Cases,	12	124	106	32	17	16	**307**
	Deaths,	4	35	28	6	5	6	**84**
Average Number of Inmates, including Patient,		3·5	5·3	7·0	7·0	6·7	...	5·8
All Houses at Census, 1911. Average Number of Inmates,		2·2	4·0	5·0	5·0	5·0		4·4

The average number of inmates, including the tuberculous patient was, as the table shows, higher for every size of house than was found for all houses of each size at the census. This was true both of pulmonary cases and of other cases of tubercle, but was more marked in the latter than the former. Thus, in two-roomed houses with tuberculous cases, the average number of inmates was exactly one more than in houses of this size thoughout the City, or about 5 in place of 4. The difference was, however, greater for three-roomed houses, with an average of 6·6 in place of 5. For four-roomed houses, the difference was the same as for three-roomed; while for houses of five rooms and upwards, the average number of inmates was 6·3, in place of the normal 5. These differences are, on the whole, greater than those of the previous year.

It is clear that the families that ought to have the least crowding, or lowest density of occupancy, in their houses have the most. This is altogether wrong, both in the interests of those who are ill and those who are well. The necessarily fouler air hinders the recovery of the tuberculous members of the family, and increases their infectivity for the other members, and at the same time lowers the power of these others to resist infection.

I have from the first strongly advocated the giving of assistance by the public authorities to enable the poorer consumptive families to move into a larger house. There could be no better way of expending a part of the huge sums of public monies now being devoted to the treatment and prevention of tuberculosis.

Of equal importance with the size of the house, and mainly dependent on it, is the position of the patient in regard to the use of a separate room or bed. The accompanying table contains information as to this for cases both of pulmonary tubercle and of other tubercle at the time of notification, and shows that, excluding the 20 cases regarding which the information was defective, only one-third of the cases of pulmonary tuberculosis occupied a separate bed and room and were sleeping under satisfactory conditions in respect of isolation; that an additional one-seventh had a separate bed but not a separate room; and that fully one-half of the whole cases had neither a separate bed nor a separate room. In the previous year, the proportion of the last group was slightly lower.

As regards the patients suffering from other forms of tubercle, where, as a rule, there is no active infection, isolation had been less practised. Thus, of 307 cases, only one-seventh had a separate room, and about one-fourth more had a separate bed, but not a separate room. Considerably more than one-half had not a separate room or bed.

I have already, in earlier reports, expressed the view based on our experience in Aberdeen, that tuberculosis appears, on the whole, to be rarely conveyed between spouses, except where the exposed person has an inherited predisposition to tuberculosis. It is proper to assume, in the administration of tuberculous cases, that where either parent is tuberculous, all the children have probably some predisposition to tuberculosis, and are more susceptible than ordinary to tuberculous infection. It is, therefore, strongly inadvisable that children in such a family should sleep with the tuberculous parent, although a tuberculous parent may often safely occupy the same

TUBERCULOSIS CASES.—ROOM AND BED ACCOMMODATION AT NOTIFICATION.

		Separate Bed		No Separate Room or Bed.	Not Stated.	Totals.
		and Separate Room.	but not Separate Room.			
Pulmonary Tuberculosis,	Male, .	85	34	115	11	245
	Female, .	84	36	172	9	301
	Both Sexes,	169	70	287	20	546
Other Tuberculosis, .	Male, .	20	40	78	9	147
	Female, .	24	32	98	6	160
	Both Sexes,	44	72	176	15	307

bed with a non-tuberculous spouse; but even this is a risk that should not ordinarily be undertaken. It is similarly inadvisable for one tuberculous child in a family, of which presumably the other members are unduly susceptible of infection, to sleep with any such other members. In our administrative procedure we make a special point of preventing tuberculous persons sleeping with persons of blood affinity.

In this connection it has to be noted, in regard to the 115 male cases of pulmonary tuberculosis who shared a bed with one or more of the other members of the household, that in 39 cases the other occupants of the bed were brothers or sisters, and that in 6 cases the occupants were children of the patient. There were thus at least 45 male cases in which the danger of infection by them was distinctly imminent. To these should perhaps be added 25 cases in which the patient was sleeping with the parents, and one case in which an uncle shared the bed. In 43 cases, the bed was shared by the wife of the patient. To these should be added the 6 cases already referred to as sleeping with their children, as in each of these cases the wife also occupied the same bed. In one case, the patient slept with a lodger.

As regards the 172 female cases of pulmonary tuberculosis that shared their bed with another member of the household, 52 were sleeping with brothers and sisters, and 28 were sleeping with one or more of their children. In 50 cases, infected children were sleeping with their parents, and in 35 instances tuberculous women were sleeping with their husbands, besides 10 cases already included among those in which the patient shared her bed with her children, but where the husband also occupied the bed. In 3 instances, the patient was sleeping with an aunt or a cousin; in 1 case, with the housekeeper; and in 3 cases, with the landlady.

As usual, it was found that, in many cases of tuberculous children sleeping with parents, one or other parent, although not notified as tuberculous, had a very suspicious health history, and had probably been the source of the infection.

As to the conditions of cases of other forms of tuberculosis, taking both male and female cases together, it was found that of the 176 cases sharing their bed with another inmate of the household, there were 13 sleeping with their spouse, including 3 cases in which children also occupied the bed, 75 sleeping with their parents, 80 sleeping with brothers or sisters, 6 sleeping with other relatives, such as cousins and aunts, and 2 with unrelated persons.

The danger of infection, however, from non-pulmonary cases is usually absent or slight.

Loan of Beds.—In order to facilitate the separation of the patient from other members of the household, beds and bedding were, as in the preceding three years, given on loan to necessitous patients who did not desire admission to hospital, or who had to wait for some time for admission. During the year, 193 beds or cots with the necessary bedding were thus lent, and in 10 cases where bedsteads were available but the bedding was insufficient, bedding was alone lent. In the preceding year, 117 beds with bedding had been lent, as also 11 sets of bedding alone, but several beds had been returned before the close of the year. On the last day of 1914, 191 beds, as against 79 at the end of the preceding year and 52 at the end of

1912, were on loan. It is pleasing to be able to state that, in almost every instance, not only the beds but also the bedding were returned in good and clean condition.

A pocket sputum flask was supplied in every case requiring it, along with a quantity of disinfectant, which was renewed as often as it was required. A copy of instructions for the use of consumptives was left in each household. The disinfection of each house is carried out after the removal of the patient to the City Hospital or other institution for treatment, as is also the disinfection of the house and bedding after death. Inquiries were in every case made as to the presence of suspected tuberculosis in other members of the family. A question on this point appears in the notification form supplied to the medical attendant. Suspicious cases were, with the concurrence of the medical attendant, examined by the Tuberculosis Medical Officer.

Institutional Treatment.—The accompanying table contains information as to the number of cases that were admitted to indoor institutional treatment during the year, or were in clinical institutions when notified. The number of cases for each institution is given, and a distinction is made between pulmonary cases and cases of other forms of tuberculosis. The corresponding numbers for the preceding year are given for comparison.

Tuberculous Cases Notified and Receiving Indoor Institutional Treatment.

	1914.			1913.		
	Pulm. Tuberc.	Other Tuberc.	Total.	Pulm. Tuberc.	Other Tuberc.	Total.
City Hospital (Sanator. Wards and Shelters),	150	12	162	135	10	145
Newhills Sanatorium,	31	8	39	28	5	33
Tuberc. Wards, Oldmill (Parish Council),	62	11	73	35	3	38
Royal Infirmary,	16	28	44	28	54	82
Sick Children's Hospital,	8	59	67	8	74	82
Cults Convalescent Home,	1	2	3	0	3	3
Eidda Home,	0	3	3	0	1	1
Linnmoor Home,	13	3	16	5	3	8
Scotstown Moor Camp,	1	0	1	1	0	1
Nursing Home (Aberdeen),	0	1	1	—	—	—
Morningfield Hospital,	0	1	1	—	—	—
Kingseat Asylum (Parish Council),	6	2	8	10	1	11
Royal Asylum,	4	0	4	2	2	4
Kingussie Sanatorium,	1	0	1	3	0	3
Peebles Sanatorium,	—	—	—	2	0	2
Brompton Hospital, London,	—	—	—	0	1	1
Leeds Sanatorium,	—	—	—	1	0	1
Pinewood Sanatorium,	—	—	—	1	0	1
Brechin Infirmary,	0	1	1	1	0	1
Thomas Walker Hospital, Fraserburgh,	1	0	1	0	1	1
Bridge of Weir Sanatorium,	1	0	1	—	—	—
East Anglian Sanatorium,	1	0	1	—	—	—
King Edward VII. Sanatorium,	1	0	1	—	—	—
Milnathort Sanatorium,	1	0	1	—	—	—
Lerwick Hospital.	0	1	1	—	—	—
Buchan Poorhouse,	0	1	1	—	—	—
Preston Infirmary,	0	1	1	—	—	—
Total Admissions,	298	134	432	260	158	418
Deduct patients receiving treatment in two institutions,	36	12	48	11	11	22
Net number of cases,	262	122	384	249	147	396

In a few instances, the patient had received treatment in more than one institution, but the number given for each institution includes every case admitted to treatment in that institution, whether such case had previously or subsequently received institutional treatment elsewhere or not.

The table shows that 384 cases had been admitted during the year to indoor institutional treatment, after deducting 48 cases that had received treatment in two institutions. The net number of cases of pulmonary tuberculosis was 262, and of other tuberculous cases, 122.

As the total notified cases of pulmonary tuberculosis during the year amounted to 546, it will be seen that almost one-half (48 per cent.) received the benefits of such treatment. Of the 307 notified cases of other forms of tuberculosis, 40 per cent., or between one-third and one-half, received indoor institutional treatment.

Of the 262 pulmonary cases treated, 47 were under ten years of age, 69 between ten and twenty years, 91 between twenty and forty years, and 55 above forty. Of the other tuberculosis cases, the numbers for the corresponding age-periods were, respectively, 58, 40, 17, and 7.

The City Hospital, with its special provision for the treatment of tuberculosis, especially pulmonary cases, naturally took the lead in the number of admissions, with 162 cases, of which 150 were pulmonary and 12 were cases of other tubercle. The tuberculous wards of the Parish Council came next, with 73 cases, followed by the Sick Children's Hospital, with 67 cases. The Royal Infirmary dealt with 44 cases. The cases treated in the Parish Council wards were mostly pulmonary cases, while those treated in the Royal Infirmary and Sick Children's Hospital were mostly non-pulmonary. Newhills Sanatorium provided treatment for 39 cases, mostly pulmonary. The Children's Home at Linnmoor, which is primarily intended as a summer home for ailing children, received during the months when it was not thus occupied, 16 cases, 13 of which were pulmonary. This is exactly twice as many cases as in the preceding year. The advantages of this Home are considerable for the treatment of children in an early stage of pulmonary tuberculosis, and it is to be hoped that the Home will be still more fully utilised in the future. A few cases were also dealt with at the Cults Convalescent Hospital and at the Eidda Home, and a number of hospitals and sanatoria in Scotland and England received each one case. It is proper to add that, except in one instance, none of the patients treated in institutions unconnected with the City were sent to these institutions by the Health Department. The local institutions provided adequate accommodation for dealing with all cases willing to receive institutional treatment.

The average stay of the tuberculous cases discharged during 1914 from the hospitals and sanatoria giving indoor institutional treatment was, in regard to pulmonary cases, 119 days for the City Hospital, 30 for the Royal Infirmary, 27 for the Sick Children's Hospital, 142 for Newhills Sanatorium, and 72 for the tuberculous wards of the Poorhouse. The corresponding numbers for the preceding year were, in the same order, 128, 84, 27, 96, and 90. As regards the cases of other tubercle, the average stay was 61 days for the City Hospital, 28 for the Royal Infirmary, 92 for the Sick Children's Hospital, 50 for Newhills Sanatorium, and

35 for the tuberculous wards of the Poorhouse—the corresponding figures for the preceding year being 73, 41, 38, 52, and 0.

As regards *outdoor institutional treatment*, this was also chiefly supplied at the City Hospital, the facilities for such treatment there having been greatly increased by the opening of the Tuberculosis Institute or Dispensary in April, 1914. During the year, 286 cases, of which all were pulmonary except 6, received outdoor treatment at the City Hospital or the Tuberculosis Institute. A considerable proportion of the cases was treated with tuberculin. At the Royal Infirmary, 20 cases were treated—2 pulmonary and 18 of other tubercle. At the Sick Children's Hospital, 80 cases were treated—2 pulmonary and 78 of other tubercle. At the Aberdeen Dispensary, 30 cases received treatment, all being pulmonary except 5. The Parish Council dealt with 25 cases—19 pulmonary and 6 of other tubercle.

There was thus a total of 441 cases (328 pulmonary and 113 other tubercle) that received outdoor institutional treatment during the year. In the preceding year, a total of 236 cases was dealt with, of which 153 were pulmonary and 83 other tubercle. A considerable proportion of the cases in both years had received, either before or afterwards, indoor institutional treatment.

Tuberculosis Institute.—The Institute, which has just been referred to as having been opened early in 1914, occupies a detached building within the grounds of the City Hospital, with a direct entrance from Urquhart Road, as also from the hospital grounds. The building stands in proximity to the tuberculosis wards, and, although not originally erected for its present purpose, is admirably suited for the dispensary treatment of tuberculous cases. It consists of two storeys, the lower of which is occupied by a commodious waiting-room, four cubicles for the undressing of the patients, a consulting room, with small room attached for the examination of throats, &c., a small dispensing room, a large bureau for the clerical staff and the records, and a private office for the Tuberculosis Medical Officer. The upper storey is not yet wholly occupied. Two of the rooms have been fully equipped for laboratory purposes and are looked after by an experienced attendant, who was formerly principal attendant in the Bacteriological Department of the University. There is also a dark room with an X-ray apparatus for radiographic examinations, with a developing room attached. There still remain two rooms to meet future extensions of the tuberculosis work.

Agreement with Parish Council for Treatment of Tuberculosis Cases.—In March, 1914, after considerable negotiation with the Parish Council, an agreement was come to between the Parish Council and the Town Council under which, with the approval of the Local Government Board, the Town Council undertook to pay to the Parish Council 15s. 6d. per week for each tuberculosis patient undergoing treatment in the tuberculosis wards of the Parish Council's hospital at Oldmill. It had been contended for some time by the Parish Council, who in this contention had the countenance of the Local Government Board, that it was the duty of the Local Authority, as the body chargeable under the Public Health Act with the control and hospital treatment of cases of infectious disease, to make provision also for the treatment of cases of tuberculosis. The Town Council, without formally admitting their liability, resolved to make the payment above stated, subject to certain conditions, of which the gist is that the Parish Council was to satisfy the Local Government Board as to the tuberculosis wards being provided with an adequate and competent nursing staff and adequate medical attendance; that the feeding and treatment of the patients was to be approved by the Medical Officer of Health or the Tuberculosis Medical Officer; that the Medical Officers of the Parish Council were to keep such records of the cases as might be required by the Medical Officer of Health, and were to furnish, when desired, information as to the progress of any patient; that the Parish Council was to grant all reasonable facilities to the Medical Officer of Health and the Tuberculosis Medical Officer in the visitation and examination of the patients; and that the payment for each patient was to continue only during such period as might appear to the Medical Officer of Health or the Tuberculosis Medical Officer to be necessary for the treatment of the case. The agreement was to be terminable on six months' notice from either side.

BACTERIOLOGICAL EXAMINATIONS.

Table XII. gives a summary for 1914, and for each of the preceding ten years, of the bacteriological examinations made for the City in the Bacteriological Department of the University by the Professor of Pathology and his special assistant, under the agreement with the Town Council and other Local Authorities in the north-east of Scotland. The assistant for the year was Dr. Douglas Cheyne, who was

TABLE XII.—ABERDEEN.—BACTERIOLOGICAL EXAMINATIONS.

YEAR.	CASES OF SUSPECTED DISEASE.													
	TYPHOID FEVER.			DIPHTHERIA.			TUBERCULOSIS.			EPIDEMIC CEREBRO-SPINAL MENINGITIS.			OTHER DISEASES.	TOTAL.
	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.		
1914 . .	**16**	**142**	**158**	**414**	**3735**	**4149**	**100**	**466**	**566**	**0**	**0**	**0**	**3**	**4876**
1913 . .	52	280	332	892	1447	2339	131	489	620	0	2	2	0	3293
1912 . .	225	747	972	800	1125	1925	142	477	619	5	23	28	3	3547
1911 . .	57	161	218	409	753	1162	98	318	416	2	29	31	3	1830
1910 . .	36	114	150	320	671	991	69	224	293	5	30	35	6	1475
1909 . .	27	83	110	189	469	658	87	180	267	22	51	73	8	1116
1908 . .	25	121	146	213	202	415	73	161	234	6	15	21	4	820
1907 . .	31	139	170	163	214	377	60	186	246	5	23	28	3	824
1906 . .	19	92	111	176	222	398	84	178	262	...	...	...	5	776
1905 . .	8	76	84	104	124	228	83	182	265	...	...	...	308*	885
1904 . .	17	95	112	160	162	322	83	154	237	...	...	...	7	678

* 307 of these examinations were of the blood of Typhus cases.

succeeded, shortly before the close of the year, by Dr. Andrew Laing and Dr. Middleton Brown. Both Dr. Cheyne and Dr. Brown are now with the Expeditionary Forces.

The University and the Public Health Department suffered a great loss in the death of Professor Dean in the spring of the year, after an illness of many months, during which period Dr. George M. Duncan acted as substitute for Professor Dean, and rendered valuable assistance to the Health Department in the superintendence of the work done by the special bacteriological assistants.

In the autumn of 1914, Dr. Theodore Shennan, Pathologist-in-Chief of the Royal Infirmary of Edinburgh, and Lecturer in Applied Pathology in Edinburgh University was appointed successor to Professor Dean in the Chair of Pathology and Bacteriology in the University, and at once kindly consented to carry on the agreement entered into between the Town Council and his predecessors in the Chair.

The number of examinations given in the table does not include those made in the laboratory of the City Hospital. The examinations (4,876) at the University were considerably more numerous than in any preceding year since the arrangement with the University was begun in 1898. The increase was, as will be seen from the table, entirely due to the very large number of examinations made in connection with diphtheria. The examinations for this disease included, as already mentioned in an earlier part of the report, a considerable number of swabbings of the throat and nostrils of persons who had been in contact with diphtheria cases. No fewer than 4,149 bacteriological examinations were made for diphtheria. In order to assist in overtaking the work, two student assistants were employed in the laboratory for a considerable length of time, and other two, and occasionally three, students gave their services in taking swabbings.

In addition to the examinations connected with human disease, several bacteriological examinations were made of samples of food and animal products.

A considerable number of samples of milk were examined for the presence of the tubercle bacillus by means of animal inoculations. The results of these examinations are given later under the head of "Dairies."

COMPARISON WITH OTHER TOWNS.

(Tables XIII. and XIV.)

Two tables (XIII. and XIV.) are submitted, in which the usual comparison is made between Aberdeen and other large towns in Scotland in regard to some of the more important features of their vital statistics.

The rates for births and deaths are corrected for transfers, that is, for births or deaths transferred from the records in the place of their occurrence to the records of the place of home residence.

A further correction is applied to the death-rate from All Causes. This correction is necessary to a strict comparison between the towns, owing to the differences

TABLE XIII.—BIRTH, DEATH, AND MARRIAGE RATES DURING THE YEAR 1914.

Seven Principal Towns in Scotland.

(Corrected for transfers of births and deaths.)

	Glasgow.	Edinburgh.	Dundee.	Aberdeen.	Paisley.	Leith.	Greenock.
ESTIMATED POPULATION (*in thousands*).	1054	325	177	163	87	80	78
MARRIAGE-RATE (*per* 10,000 *of population*).	98	97	83	94	73	62	85
BIRTH-RATE—							
A—Total Births (*per* 10,000 *of population*).	280	199	252	246	276	269	328
B—Legitimate Births (*per* 1,000 *Married Women aged* 15-45 *years*).	236	181	214	210	251	218	284
C—Illegitimate Births—							
(*a*) *Per* 100 *total Births*	6·4	7·8	9·1	9·4	5·8	5·6	5·1
(*b*) *Per* 1,000 *Unmarried Women and Widows aged* 15–45 *years*	12·5	8·6	14·2	15·6	10·1	11·9	13·5
DEATH-RATE—							
A—All Ages (*per* 10,000 *of population*).							
(*a*) All Causes,	166	155	169	169	158	154	180
Corrected for Age and Sex Distribution	182	161	174	171	175	161	183
(*b*) Principal Epidemic Diseases,	21	11	17	20	17	11	16
(*c*) Tuberculosis,	...	...	...	...	...	...	...
(1) Pulmonary,	13·0	11·7	14·4	10·5	9·5	11·0	10·0
(2) Other,	6·9	5·8	6·9	5·0	5·2	7·5	9·4
(*d*) Bronchitis,	12·2	8·6	11·8	9·7	11·6	9·3	11·3
(*e*) Pneumonia,	16·2	12·4	12·0	13·3	10·5	11·8	18·8
(*f*) Malignant Diseases,	10·2	13·7	13·0	11·1	9·6	11·7	10·2
(*g*) Organic Heart Disease,	11·2	17·8	14·7	17·7	12·9	16·4	15·2
(*h*) Nephritis and Bright's Disease,	5·8	4·8	4·3	4·7	4·1	3·9	3·7
(*i*) Diarrhœa and Enteritis (under 2 years),	6·4	2·9	8·2	5·3	4·9	3·8	6·5
(*j*) Violence (excl. Suicide),	6·1	4·8	6·7	5·8	4·7	8·3	8·2
B—Infants under One Year (*per* 1,000 *births*).	133	110	135	121	133	99	108
EXCESS OF BIRTH-RATE over DEATH-RATE	114	44	83	77	118	115	148

in sex and age distribution, as explained in certain preceding annual reports. This correction has been made with the assistance of the factors for correction, prepared by the Registrar-General from the census of 1911.

Marriages.—Table XIII. shows that, among the principal towns, Aberdeen occupied, as in the preceding year, the third highest place, with a rate of 94 per 10,000 of population. The towns with a higher marriage-rate were Glasgow, with 98, and Edinburgh, with 97.

As has been pointed out in previous reports, the marriage-rate for the larger towns is inflated beyond its proper dimensions by the celebration of a considerable number of marriages of parties both of whom reside outside the town.

Births.—In respect of births, Aberdeen had, as in the preceding year, the second lowest birth-rate (246 per 10,000 of population), and stood next to, but considerably above, Edinburgh, with 199. Greenock, with 328, had, as in each of the preceding four years, the highest birth-rate.

It is satisfactory to note that in each of the seven towns there was a slight increase of the birth-rate as compared with the preceding year. For several years previously, the tendency had been, in almost every instance, in the contrary direction.

Reference has already been made, in an earlier part of this report, to the value, as an estimate of the real fertility of a population, of stating the births in relation to the number of women between the ages of 15 and 45 in each population.

Thus stated, the legitimate births per 1,000 married women of the ages mentioned were second lowest in Aberdeen, with 210, Edinburgh being lower, with 181. By this method of estimation, the birth-rate is 16 per cent. higher in Aberdeen than in Edinburgh, while by the ordinary method the difference is 24 per cent.

Illegitimate Births.—The percentage of illegitimate births in the total births was distinctly higher in Aberdeen than in any of the other principal towns, being 9·4, as against 9·1 in Dundee—which was the next highest—7·8 in Edinburgh, and 6·4 in Glasgow. The lowest was Greenock, with 5·1. Stated as births per 1,000 unmarried and widowed women of child-bearing ages (15 to 45 years), Aberdeen was, with 15·6, more emphatically the highest of the four principal towns, Dundee coming next with 14·2, Glasgow with 12·5, and Edinburgh with 8·6.

The unfortunate position of Aberdeen in respect of illegitimate births is in part explained, although not excused, by the fact that in a not inconsiderable number of cases the mother is living in cohabitation with the father of her child, and the nature and permanency of the cohabitation are almost equivalent to those of marriage.

Deaths.—As regards the death-rate from *All Causes* and at all ages, after correction for age and sex distribution, Aberdeen had the third lowest death-rate, with 171 per 10,000 of population, Leith and Edinburgh being somewhat lower, each with 161. The remaining four towns had a higher rate—Dundee having 174 and Glasgow 182. In the preceding year, Aberdeen had the fourth lowest corrected rate, Glasgow, Dundee, and Greenock being higher.

In 1912, Aberdeen had the lowest corrected death-rate, and in 1911, the second lowest. In each of the preceding four years—1907 to 1910—Aberdeen had the lowest corrected death-rate.

In regard to *Infantile Mortality* (deaths of infants under one year per 1,000 births), Aberdeen occupied a better position than in any of the preceding four years. It had the fourth lowest rate—Leith, Greenock, and Edinburgh being lower. In each of the preceding three years, it had the second highest rate, Dundee alone being higher.

In respect of the death-rate from the *Principal Epidemic Diseases*, Aberdeen had the second highest rate, and stood next to Glasgow.

As regards the death-rate from *Pulmonary Tuberculosis*, Aberdeen, with 10·5, had a lower rate than Glasgow, Edinburgh, Dundee, or Leith, but a higher rate than Paisley or Greenock. From *All Forms of Tuberculosis*, Aberdeen had the second lowest death-rate—Paisley only being lower. In each of the preceding two years, Aberdeen had the lowest rate both from pulmonary tuberculosis and from all forms of tuberculosis.

As to the death-rate from *Bronchitis*, Aberdeen was above Edinburgh and Leith, but lower than the other towns; and as regards *Pneumonia*, it was lower only than Glasgow and Greenock.

In respect of *Malignant Diseases*, Aberdeen had the fourth lowest rate, the rates for Paisley, Glasgow, and Greenock being lower. The rates in Edinburgh and Dundee were considerably higher.

As has been pointed out in preceding annual reports, the death-rate from malignant diseases continues to be distinctly lower in the West Coast towns than in the East Coast towns, the average, in 1914, for the former towns being 10·0, and for the latter, 12·4. In 1913, the corresponding figures were 9·7 and 12·1, while in 1912 they were 9·2 and 12·2, and in 1911 they were 8·8 and 11·3.

Both sets of towns show a continuous and considerable increase, the increase being, however, somewhat greater in the West Coast than in the East Coast towns.

The steady difference in the mortality from malignant diseases between the two sets of towns is distinctly interesting, and is not, I think, to be explained entirely by differences in diagnosis by the medical practitioners of the different towns.

As to the death-rate from *Organic Heart Disease*, Aberdeen, with 17·7, stood distinctly above all the other towns except Edinburgh. In Glasgow, the rate was only 11·2.

As to *Nephritis and Bright's Disease of the Kidney*, Aberdeen stood also high, with a rate of 4·7, and immediately below Edinburgh. The rate was lowest in Greenock, with 3·7.

The death-rate in Aberdeen from *Diarrhœa and Enteritis* in children under two years was 5·3, and was considerably below the rate for Dundee, as also below the rates for Glasgow and Greenock. The rate was lowest in Edinburgh, with 2·9.

In respect of deaths from *Violence (excluding Suicide)*, Aberdeen had the third lowest rate, with 5·8—Paisley and Edinburgh being lower.

Excess of Birth-Rate over Death-Rate.—As in each of the preceding three years, the excess was highest in Greenock, with 148 per 10,000 of population, and lowest in Edinburgh, with 44. In Aberdeen, it was 77.

It is exceedingly interesting to note that Greenock, which had the highest death-rate, nevertheless took the best place in respect of natural increment of population, while Edinburgh, with almost the lowest death-rate, took the lowest place. The same contrast may be said to be an almost constant feature of each of the more recent years.

It is a fair subject for debate whether the excess of the birth-rate over the death-rate is not a better measure of the national and serviceable health of a community than the death-rate alone.

Zymotic Prevalence.—In Table XIV. a comparison is made between the four chief towns in respect of (*a*) the number of notified cases of the three principal zymotic diseases, namely, diphtheria, scarlet fever, and typhoid fever; (*b*) the percentage of deaths among such cases; (*c*) the percentage of the cases removed to hospital for treatment; and (*d*) the number of deaths from these diseases per 10,000 of population.

In regard to *Diphtheria*, it will be observed that Aberdeen, judged by the number of notified cases, had by far the highest prevalence, the rate being 100 per 10,000 of population, as compared with 28 for Edinburgh and still lower rates for Glasgow and Dundee. The case-mortality in Aberdeen was, however, lower than in any of the other towns, and points to the probability of a somewhat fuller notification of mild cases in Aberdeen than in other towns, although the difference may be equally explained by a slight difference in the type of the disease. The percentage of cases removed to hospital for treatment was 91 in Aberdeen, or exactly the same as in Glasgow. In Edinburgh, it was 95, and in Dundee, 73.

Scarlet Fever was also more prevalent in Aberdeen during the year than in any of the other three cities, the notified cases per 10,000 of population being 95, as against 70 in Edinburgh, which was the next highest. The case-mortality, which is ordinarily low for this disease in Aberdeen, was considerably higher than usual, and exceeded that of any of the other cities.

Owing to the large demand for the accommodation of cases of diphtheria in the hospital, the proportion of admissions of scarlet fever cases to hospital treatment was considerably under the average for previous years, being only 67 per cent. In Glasgow, it was 93 per cent., while in Edinburgh it was as high as 97. In Dundee, it was 66.

I am satisfied that the high case-mortality in Aberdeen, although it may in a slight degree have been influenced by the somewhat low proportion of cases obtaining the benefits of hospital treatment, was almost exclusively due to the virulent character of several of the cases. The cases not removed to hospital were in almost all instances cases that were provided with fairly satisfactory accommodation and nursing at home.

As regards the prevalence of *Typhoid Fever*, Aberdeen, with 0·9 cases per 10,000 of population, had distinctly the lowest prevalence of any of the four cities. The percentage of cases removed to hospital was 87 for Aberdeen, as compared with 89 for Edinburgh and 96 for Glasgow. In Dundee, it was 75.

Table XIV.—Diphtheria, Scarlet Fever, and Typhoid Fever in 1914. and in preceding Five Years.

Four Principal Towns in Scotland.

(Corrected for transferred deaths.)

City.		Estimated Population in Thousands	Total Number of Notified Cases.			Number of Notified Cases per 10,000 of Population.			Number of Deaths per 100 Notified Cases			Percentage of Cases treated in Hospital.			Number of Deaths per 10,000 of Population.		
			Diphtheria.	Scarlet Fever.	Typhoid Fever.	Diphtheria.	Scarlet Fever.	Typhoid Fever.	Diphtheria.	Scarlet Fever.	Typhoid Fever.	Diphtheria.	Scarlet Fever.	Typhoid Fever.	Diphtheria.	Scarlet Fever.	Typhoid Fever.
Aberdeen	1914	163	1,627	1,553	15	100	95	0·9	8·2	5·4	20·0	91	67	87	8·3	5·2	0·2
	Average *1909-13*	...	*760*	*1,035*	*49*	*46*	*62*	*2·9*	*7·9*	*1·9*	*14·4*	*90*	*82*	*94*	*2·8*	*1·3*	*0·4*
Glasgow, .	1914	1,054	1,521	5,636	359	14	53	3·4	10·1	4·0	22·6	91	93	96	1·4	2·2	0·8
	Average *1909-13*	...	*1,883*	*3,759*	*335*	*22*	*44*	*4·2*	*10·4*	*3·5*	*16·1*	*90*	*92*	*94*	*2·3*	*1·5*	*0·7*
Edinburgh,	1914	325	902	2,270	63	28	70	1·9	10·8	1·9	17·5	95	97	89	3·0	1·3	0·3
	Average *1909-13*	...	*483*	*1,335*	*37*	*15*	*41*	*1·1*	*8·8*	*2·4*	*13·8*	*92*	*95*	*93*	*1·3*	*1·0*	*0·2*
Dundee, .	1914	177	319	816	79	18	46	4·5	9·4	3·6	7·6	73	66	75	1·7	1·6	0·3
	Average *1909-13*	...	*368*	*750*	*40*	*22*	*45*	*2·4*	*12·0*	*2·5*	*10·0*	*54*	*55*	*78*	*2·6*	*1·1*	*0·2*

WORKSHOPS.

(Table XV.)

The number of workshops, exclusive of factories, registered at the end of the year was 869. Each succeeding year shows a diminution. In 1913, the number was 903; and, five years previously, in 1908, it was 1,029. There was, therefore, a reduction of 34 in the number of workshops, as compared with that for the preceding year, and of 160 since the year 1908. The reduction within the past seven years has been distributed over various trades—thus, joiners' workshops have declined from 36 to 24; painters' workshops, from 47 to 31; plumbing workshops, from 32 to 26; jewellers' workshops, from 38 to 26; and dressmaking and tailoring workshops, from 288 to 222. On the other hand, fishcuring workshops have increased from 129 to 142. In the preceding year, they numbered 149.

The reduction is in many cases more apparent than real, owing to the conversion every year of certain workshops into factories by the introduction of motive power, more especially of electrical power, which is a particularly convenient source of motive power for small workshops. The proportion of factories has thus been growing at the expense of the workshops.

The accompanying tabular summary of the work done during the year by the Sanitary staff in the inspection and regulation of factories and workshops has been prepared in accordance with the requirements of the Home Secretary, and was duly submitted to the Home Office. It ought to be noted that in the list of workshops the numbers relate solely to workshops, as legally defined in the Factory and Workshops Acts, and do not include factories.

Excellent work continues to be done by the Sanitary Inspector and his staff in the sanitary control of the workshops in the City. Every workshop is regularly inspected, and an effort is made to keep it in accordance with the requirements of the Public Health Act and the Factory and Workshops Acts. It will be seen from the summary of the inspections (Table XV.) that the bulk of the defects found had reference to want of cleanliness. A considerable number of notices had also to be issued with regard to the structure or condition of water-closet accommodation, as also in regard to breaches of the special sanitary requirements for bakehouses. The requirements of the Sanitary Accommodation Order of the Home Office are practically everywhere in the City fully complied with.

Bakehouses.—The bakehouses, of which there were 58, including 8 certified underground bakehouses and baking-rooms, were, as usual, inspected every quarter or oftener, and were found, on the whole, to be in a satisfactory condition. The number of bakehouses on the list in the previous year was 44. The additions during the year were due to the inclusion of several small bakerooms used in connection with small restaurants. There has been a steady growth in the number of such eating-houses recently. The Health Visitors report that considerable use is being made of them by housewives for obtaining supplies of cooked food for their domestic tables. This is scarcely a satisfactory feature of home life, and can only be justified in special circumstances.

Two bakehouses were closed during the year.

TABLE XV.—FACTORIES, WORKSHOPS, LAUNDRIES. WORKPLACES, AND HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors.

Premises.	No. of Inspections.	No. of Written Notices.	No. of Prosecutions.
Factories (including Factory Laundries)	295	115	—
Workshops (including Workshop Laundries)	1,296	279	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	64	7	—
	1,655	401	—

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions
	Found.	Remedied.	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts:—**				
Want of cleanliness	122	120	—	—
Want of ventilation	14	14	—	—
Overcrowding	1	1	—	—
Want of drainage of floors	11	11	—	—
Other nuisances	66	64	—	—
Sanitary accommodation: insufficient	1	1	—	—
Sanitary accommodation: unsuitable or defective	40	40	—	—
Sanitary accommodation: not separate for sexes	1	1	—	—
Offences under the Factory and Workshop Act:—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	39	39	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	106	104	—	—
	401	395	—	—

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* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

3.—HOME WORK.

NATURE OF WORK.*	OUTWORKERS' LISTS, SECTION 107.									OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists.	Prosecutions.		Instances.	Notices served.	Prosecutions.	Instances.	Orders made (Section 110).	Prosecutions (Sections 109, 110).
	Sending twice in the year			Sending once in the year.				Failing to keep or permit inspection of lists.	Failing to send lists.						
	Lists. †	Outworkers. †		Lists.	Outworkers.										
		Contractors	Workmen.		Contractors	Workmen.									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Wearing apparel—															
(1) making, &c.,	20	4	196	—	—	—	—	—	—	—	—	—	—	—	—
(2) cleaning and washing,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Household linen,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lace, lace curtains, and nets,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Curtains & furniture hangings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and upholstery,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Electro-plate,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
File making,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brass and brass articles,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fur pulling,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cables and chains,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anchors and grapnels,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cart gear,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locks, latches, and keys,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas, &c.,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Artificial flowers,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nets, other than wire nets,	—	—	—	2	—	56	—	—	—	—	—	—	—	—	—
Tents,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sacks,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Racquet and tennis balls,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paper bags and boxes,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brush making,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pea picking,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feather sorting,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carding, &c., of buttons, &c.,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stuffed toys,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Basket making,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chocolates and sweetmeats,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL,	20	4	196	2	—	56	—	—	—	—	—	—	—	—	—

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* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class *only*, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3, and 4 are the *total* number of the lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be *even* numbers, as there will be two lists for each employer—in some previous returns odd numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year:—

	Number.	Average—1909-1913.
Bakehouses	30	19
Blacksmiths	27	26
Bootmakers	68	79
Fish Curers Fish Packers	142	139
Furniture, Makers of	31	45
Joiners	24	27
Painters	31	39
Plumbers	26	27
Stonecutters	20	25
Watchmakers and Jewellers	26	32
Wearing Apparel, Makers of	222	246
Other Workshops	222	241
	869	945

5.—OTHER MATTERS.

Matters notified to H.M. Inspector of Factories:—

Class.		Number.
Failure to affix Abstract of the Factory and Workshop Act (s. 133)		—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5).	Notified by H.M. Inspector	65
	Reports (of action taken) sent to H.M. Inspector	65
Other (Section 9)		94

Underground Bakehouses (s. 101):—

Certificates granted during the year	—
In use at the end of the year	8

DAIRIES.—The dairies, of which there were 490 on the register at the end of the year, including 449 milkshops and 41 dairy farms, were regularly inspected throughout the year, and their condition was, as a rule, found to be satisfactory. In a few instances where the condition was unsatisfactory—usually from defective cleanliness—notices were served by the Sanitary Inspector, and were in all cases complied with. As usual, a number of small additions, alterations, and repairs were carried out at the instance of the Health Department.

In April, 1914, the office of Veterinary Inspector in the Health Department, which had been vacant since the resignation of Mr. M'Lachlan Young in 1911, but the filling up of which had been delayed in the hope of the possibility of a joint arrangement being made with the County, was given by the Town Council to Mr. William Marshall, M.R.C.V.S., a veterinary practitioner in the City, who had already held for some years the office of Inspector under the Contagious Diseases

(Animals) Acts. The appointment was made subject to his resigning all private work and confining himself to his Corporation duties, which are to include, in addition to his previous duties under the Contagious Diseases (Animals) Acts and the work of the Health Department, all the veterinary attendance upon the horses belonging to the Corporation. The salary for the whole duties was fixed at £350.

His duties, in so far as concerns the Public Health Department, are subject to the control of the Medical Officer of Health, and were defined as follows:—

1.—To act as a Veterinary Surgeon for the purposes specified in the Public Health (Scotland) Act, 1897, the Burgh Police (Scotland) Act, 1903, and any amending Acts.

2.—To act, under the Dairies, Cowsheds, and Milkshops Orders, and relative Regulations, as Inspector of the dairies, in respect of the condition of the cattle and of the byres within the City, and to examine periodically, at least once every two months, and at such other times as may be necessary, the cattle in all such dairies, with a view to securing that the milk from the dairies shall be free from the germs or products of disease, and from any matter likely to endanger the health of persons consuming the milk.

Mr. Marshall at once began the periodical inspection of all dairy farms within the City, and has also been visiting each of the cattle marts on all sale days.

In order to make a more satisfactory provision for the cleaning of the hands of the milkers, the Health Department succeeded in arranging, during the year, with a large proportion of the dairy owners for the placing of a basin, with water, soap and a clean towel, inside the byre, or close to the door, so that the hands of the milkers might be washed immediately before beginning the milking. There is a danger that if such cleaning is undertaken in the dwelling-house of the farmer or a farm-servant, some household duty may be thoughtlessly undertaken after the hands have been washed. If there are young children in the house, and the milker is the mother, or a maid in the household, such duty may consist in some attention to one of the children as may readily infect the hands if it so happen that the child is infected with any disease conveyable in milk, such as scarlet fever or typhoid. Children may occasionally suffer in a mild form from one or other of these diseases for several days, or even during the whole period of the attack, without the disease being recognised. We had an illustration of this during the previous year in a small epidemic of scarlet fever that almost certainly arose from the contamination of the milk in some such way.

As it is almost of equal importance against such infection to have the personal clothing of the milker protected by a clean over-all, covering the whole of the ordinary dress, we have likewise been insisting upon the wearing of such an over-all by all milkers, and upon its being put on after the milker has left the house.

In a properly equipped dairy, there ought to be a small room or building attached to the byre, or close to it, in which such personal ablution could be carried out immediately before every milking, and a clean over-all put on. Such an arrangement would tend to lessen considerably the risk of milk infection.

The powers of Local Authorities for the regulation of dairies, although already considerable, are substantially augmented under the Milk and Dairies (Scotland) Act of 1914. The Act, however, on account of the War, is meanwhile in abeyance by order of the Local Government Board. It is desirable that a uniform standard, not only in respect of the terms of the dairy regulations, but also in the strictness of their administration, should, so far as practicable, be established throughout the whole country. Large towns are naturally dependent for the bulk of their milk supply on districts outside their own area. Thus Aberdeen obtains four-fifths of its milk supply from districts entirely outside the jurisdiction of its Local Authority. Milk is one of the most valuable and one of the most universally used of human foods, and plays an especially important part in the feeding of invalids and very specially of infants that are not nursed by their mothers. It is also of all foods the one most susceptible to dangerous contamination, particularly because of the conditions under which it is procured—its free contact with the human hand in the act of milking and the readiness with which the micro-organisms of human disease may survive and possibly multiply in it.

Tubercle in Milk.—During the year, 92 samples of different milks were examined for tubercle by inoculation methods in the bacteriological laboratory of the University. Of the 92 samples, 22 were obtained from dairy herds within the City, 68 from milkshops receiving the whole of their supply from herds outside the City, one from a dairy outside the City, and one from a milk cow in an auction mart. It has to be explained that the samples from dairy herds within the City were taken only from the milk of cows suspected to be tuberculous at the examination of the Veterinary Inspector—usually cows with indurated udders. On the other hand, the samples taken from milkshops drawing their milk supplies from farms outside the City were usually random samples, without reference to any known or suspected condition of the dairy herds supplying the milk. It was a necessary consequence that the proportion of milks found to be tuberculous should be considerably larger among the samples from the dairy herds of the City than among the samples from the others. The milk was found in 11 cases to be infected with tubercle. Three of the infected milks were from suspected individual cows in the dairy herds within the City. This gives a percentage of 13·5 of infected milks among the 22 milk samples so taken, but, as just mentioned, all of these samples were taken from selected suspected cows. In all three cases, the tuberculous cow was removed from the herd, one being dealt with under the Tuberculosis Order and the remaining two being sold to butchers.

As regards the 68 samples from milkshops receiving their supply from country farms, 8 samples, or 11·8 per cent. of the whole, proved to be tuberculous. As these samples were taken irrespective of the condition of the cows, the results undoubtedly represent a much larger proportion of tuberculous cows in such dairies than in the City dairies.

In each case where a milk from a milkshop receiving its supplies from the country was found to be tuberculous, the result was communicated to the Medical

Officer of the district in which the dairy or dairies were situated. In all cases, the Medical Officer arranged for a veterinary inspection of the dairy herd, and it is of interest to note the results. In one case, two cows of the herd were found to have indurated udders, and to be yielding tuberculous milk. Both were subsequently slaughtered. In a second case, four cows in the herd were suffering from indurated udders, but the milk of only one of the cows proved to be tuberculous. This cow was removed from the herd and slaughtered under the Tuberculosis Order. In a third case, two cows had indurated udders, the milk from one of which was found to be tuberculous. The cow with tuberculous milk was removed from the herd. In a fourth instance, two cows were again found with indurated udders, but the milk from neither cow was found to be tuberculous. In a fifth case, once more two cows were found with indurated udders, and again the milk from neither was found to contain tubercle. But there had been recently sold from this herd four cows, one of which had a history strongly suspicious of tubercle. In the sixth case, two cows were found with indurated udders, the milk from one being tuberculous. Both cows were removed from the herd and sold to a butcher. In the seventh case, two cows were found with indurated udders, and the milk from one proved to be tuberculous. This cow was removed from the herd. As the suspicions regarding this dairy were not quite allayed, a second sample was taken later on of the mixed milk, when a positive tuberculous result was got. This led to a further examination of the herd, when another cow was found to present a very slight induration of the udder, but the milk of this cow did not prove to be tuberculous. A third sample of the mixed milk from the same herd was subsequently taken, but was found to be free from tubercle.

As in the preceding year, an effort was made to secure a bacteriological examination of the milk supply or supplies of every notified human case of tuberculosis of the abdomen or cervical glands. In all the cases except three, the patients had obtained their milk supplies from sources outside the City. In these three cases, the dairy herd was carefully examined, and in only one of the herds was a cow found with a suspicious udder, but the examination of the milk did not reveal the presence of tubercle.

As regards the milk supplies from outside the City, no action was taken in informing the officers of the Local Authorities concerned, as they declined in the preceding year to incur the expense of having a veterinary inspection made of the suspected dairy herds, the more that in many cases the milk supply of the patient was a mixed supply from several dairies. The practice begun in the preceding year of informing the dairymen themselves by formal note of the occurrence, in the household of one of their customers, of a tuberculosis case of a kind liable to be associated with infected milk, was followed. A suggestion was made that they should endeavour to secure that the cows should be examined by a veterinary surgeon, or, if they were only retailers of milk, that they should communicate the information and suggestion to the farmers from whom they obtained their milk supplies. In several instances the results of such examination were communicated to the Health Department, but in no case was it reported that any suspicious cow had been found.

INSPECTION OF PLANS.

As usual, certain plans—chiefly of factories and workshops, and especially of those in which foodstuffs are prepared—were examined and reported on by the Sanitary Inspector and myself. Thus, plans for 13 new buildings, or alterations of existing buildings, were dealt with, 6 of which related to fishcuring premises. In the previous year, the number of plans examined was 17. Several recommendations in regard to improvements in lighting and ventilation, paving of floors, and the provision of sanitary conveniences were approved by the Town Council and given effect to.

OFFENSIVE TRADES.

The offensive trades in Aberdeen, within the meaning of the Public Health Act, are concerned chiefly with tallow melting or oil extracting from ox bones or fish livers, soap boiling, slaughtering, knackering, hide factoring, and the manufacture of manures, including fish manure and a similar product known as fish meal.

Seven applications were received during the year for the sanction of the Town Council to establish or extend businesses under the offensive trades section of the Public Health Act, and a report was in all cases, except one—which had been withdrawn—submitted by the Sanitary Inspector and myself for the assistance of the Public Health Committee in determining their recommendation to the Town Council. In each case, sanction was given by the Town Council on report from the Committee.

The most novel and interesting of the applications was by the Albuminoid Products Company, Limited, to establish, on a site in Torry, near to the new Dock, the business of the manufacture of albumen, gelatine, glue, and other albuminoid substances from fish. In their proposals and arrangements the Company had the advice of Mr. J. F. Tocher, D.Sc., County Analyst. The sanction of the Local Authority would not have been necessary under the ordinary terms of the offensive trades section of the Public Health Act, as such a business is not embraced in the trades specified in the section, but the Local Authority of Aberdeen in 1908, in order to enable them more effectively to control the business of the manufacture of fish meal, obtained the approval of the Local Government Board to the addition, to the specified trades, of the business of the manufacturer of fish meal, fish manure, fish oil, glue, or any product of the like nature manufactured from fish or fish offal. The application of the Company was accompanied by a plan of their plant and apparatus, which showed that every reasonable precaution was to be taken to avoid any possible nuisance from their operations. Sanction of the Town Council was given on the condition that it was clearly understood that the manufacture of fish manure or fish meal or similar products was not included, and that adequate means were taken to cover or enclose all parts of the apparatus or processes in which offensive effluvia might arise, and to destroy completely all such effluvia by condensation, washing, burning, or otherwise. Mainly on account of the War having begun shortly after sanction was granted, the premises are as yet only in course of erection.

Two applications were received at different times in connection with this business, owing to an alteration of the plans after the first application had been granted.

Another application of some interest was for the extension of the premises of the largest of the existing businesses in the City for the manufacture of fish oil. The premises are in the vicinity of the Docks. It was proposed to use the extension mainly for the purpose of extracting, by means of solvents, the oil remaining in fish livers after extraction of the oil by the ordinary heating process. The erection of the machinery has also in this instance been deferred on account of the War.

Another company, already carrying on the manufacture of fish oil, also applied for an extension of their premises, partly for storage and partly for manufacturing purposes. These premises are likewise situated in the vicinity of the Docks. The premises and the business, after sanction had been granted, were, however, acquired by another fish oil company, which immediately discontinued the business of oil extraction in these premises.

A firm of provision curers in King Street and Shuttle Lane applied for an extension of their premises in Shuttle Lane for carrying on the business of tallow melting and bone boiling.

The applications also included one from the principal, and practically the only, firm of chemical manufacturers in the City for the erection of new premises within their works for the grinding of rock phosphate, and the manufacture from it of superphosphate—an existing part of their business for which they desired to provide more extensive accommodation and to equip with new and modern plant. With the new plant it was expected that there would be practically no escape of disagreeable effluvia, and that the possibility of the inhalation of acrid vapours by the workmen would be greatly reduced.

Slaughter-houses.—The slaughter-houses, of which there are seven in the City, including the large slaughter-house in Hutcheon Street belonging to the Flesher Incorporation, were regularly visited throughout the year, and are being kept, on the whole, in good condition. It was felt, however, by the Sanitary Inspector and myself that, although the premises were usually clean and in good order, there was some neglect on the part of certain slaughtermen in regard to the cleanliness of the slaughtering implements, and also in regard to the use and the cleanliness of over-alls for the protection of the clothing of the slaughterers. We accordingly suggested to the Public Health Committee that additional bye-laws dealing with these matters should be made, subject to confirmation by the Local Government Board. It may be of interest to the officers of other authorities to quote the terms of the new bye-laws, which, as it will be observed, deal with certain other matters besides those just referred to:—

> "1. *Cleansing of Slaughtering Implements.*—Every knife, knife-sheath, knife-sharpener, saw, cleaver, axe, hook, and other implement used in connection with the killing of animals, or the dressing, cutting, or suspending of

carcases or offal, and every vehicle used for the conveyance of any carcase or offal, shall be kept thoroughly clean, and every such knife, knife-sheath, knife-sharpener, saw, cleaver, axe, hook, and other implement shall be washed after the slaughtering of each animal, and every such knife-sheath shall be of such pattern as shall be approved by the Town Council.

"2. *Over-alls.*—Every person employed in the killing of animals or the dressing or handling of carcases shall wear a sufficient over-all or apron to protect his clothing from being soiled by blood or other matter from the carcases, and such over-all or apron shall at all times be kept reasonably clean to the satisfaction of the Sanitary Inspector, and shall not be worn outside the premises of any slaughter-house.

"3. *Slaughtering of Animals under the Tuberculosis Order of* 1914.—No cow or other animal intended for slaughtering under the Tuberculosis Order of 1914, or under any other Order made by any competent authority to a similar effect, or under any general or local Act, for the purpose of ascertaining the condition of such cow or other animal in respect to the existence of disease, shall be slaughtered in any slaughter-house without intimation being delivered to the Medical Officer of Health or Sanitary Inspector at least three hours before the slaughter of such cow or other animal.

"4. *Admission of Dying or Dead Animals.*—If any animal is brought to a slaughter-house in a dying or dead condition, intimation thereof shall forthwith be sent to the Sanitary Inspector, and no part of the carcase or of the entrails of such animal shall be removed from the slaughter-house until the whole carcase and entrails have been examined by the Medical Officer of Health or Sanitary Inspector, or other authorised person, and his written consent obtained to the removal."

At the same time, an existing bye-law relating to the keeping of records of the animals slaughtered was modified, and made somewhat more elastic. Under the modified bye-law, the occupier of every slaughter-house has to enter in a book a statement of the number and kind of animals received into his slaughter-house, together with such other information, as may be required by the Town Council, regarding the animals and the persons from whom they have been purchased or to whom they may have been sold, and must make to the Sanitary Inspector at the end of every calendar month a return of the number and kind of animals slaughtered during the month. Forms for making such returns are being supplied, without charge, to the occupiers of the slaughter-houses, and are being regularly filled up and sent to the Health Department.

The proposed terms of the additional bye-laws were informally discussed with representatives of the Master Butchers' Association before being submitted to the Town Council, and were approved by them. The Sanitary Inspector and myself were much indebted to these representatives for their courtesy and helpful criticism.

It may be added that the pattern of knife-sheath adopted, after consultation with the Butchers' Association, is made of wood, with a leather-hinged bottom, which enables the sheath to be easily and thoroughly cleaned.

Food Inspection.—This continues to be carried out by the two special inspectors, who consult with the Sanitary Inspector and myself in cases of difficulty, as also in every case in which there is a possibility of the seizure being dealt with in Court. In only two cases was it found necessary to take proceedings in Court. In one of the two cases, a part of the carcase of a cow, which was said to have been killed by lightning, was sent from a farm in the country to one of the City meat marts, where the carcase was found to be unfit for human consumption. In the second case, a quantity of more or less putrid herrings was dealt with, which were found in the possession of a small fishcurer. In all the other cases, the seizure was always made with the consent of the owner or his agent, and the circumstances attaching to the seizure were not such as to necessitate proceedings being taken before a Magistrate.

Each slaughter-house was visited at least once daily by one or other of the meat inspectors, as were also the two important meat marts in the City, and the Fish Market. Frequent visits were also made to the numerous provision-curing works in the City. The butcher and other shops, in which food of a kind liable to unsoundness is sold, were regularly inspected.

Immediately after the War broke out, very special attention was given to the provision-curing works, the more that some were engaged almost at once in the preparation of rations and other foods for the Army and Navy. We addressed a note to the owners of every provision-curing work, requiring them immediately on receiving meat into their works for the purposes of their business, whether for Government contracts or not, to examine carefully such meat, and, if any appearance of disease or unsoundness was met with, to report forthwith by telephone the condition to the Sanitary Inspector or one of the Meat Inspectors of the Health Department. They were also warned that if the inspectors, on visiting the works, found that any meat in the works was showing any signs of unsoundness or disease, and that the condition of such meat had not been reported to the Sanitary Inspector, we would have no option but to seize the meat and take proceedings in the Burgh Court under the Public Health Act. It is only right to say that this notice was not the outcome of any observed tendency on the part of the manufacturers to use inferior or unsound meat, but it was felt desirable in the interests of the Army and Navy that the chances of the supply of such meat should be reduced to a minimum. In our opinion, the food supplies sent by the provision-curers of Aberdeen have thus far been of a high quality, and have been manufactured under satisfactory conditions in respect of cleanliness of handling and care in preparation.

The report of the Sanitary Inspector contains detailed information as to the quantity of meat seized or destroyed during the year, and to the places in which the seizures were made, but it may be mentioned here that out of about 40,000 cattle slaughtered in the City during the year, 284 whole carcases and 208 part carcases were seized or destroyed on account of disease or other cause, and that of the whole carcases 77 per cent. were dealt with on account of tuberculosis, and that of the part carcases 69 per cent. were seized for the same cause. In the preceding year, the number of whole carcases of cattle seized was 233, of which 77 per cent.

were tuberculous; and the number of part carcases seized was 245, of which 75 per cent. were tuberculous. In the year 1912, the corresponding percentages were 79 and 74. The percentages for the different years are, therefore, remarkably close. The number of carcases seized in part or in whole for tubercle amounted, in 1914, to upwards of 9 per 1,000 of the total cattle slaughtered or examined within the City.

As has been remarked in previous reports, very few calves are slaughtered in Aberdeen. Of the 40 slaughtered during the year, 8 were seized in whole or in part, 1 being tuberculous. The veal used in the City is mainly imported.

As usual, no sheep were found to be tuberculous, although nearly 47,000 were slaughtered. Sixty-six carcases of sheep were seized in whole or in part for causes other than tubercle.

During the year, slightly under 2,000 pigs were slaughtered, and 30 were seized in whole or in part, of which 13 were dealt with on account of tubercle. In the preceding year, out of 1,700 pigs slaughtered, only 1 was found to be tuberculous. There was thus a considerable increase in the number of pigs found to be tuberculous.

Besides the seizures in slaughter-houses, of which seizures there were 583, as against 541 in the preceding year, there were 325 seizures elsewhere in the City, of which 196 were in meat marts, 29 in the Fish Market, and 19 in the Cold Store. The carcases sold in the meat marts are in considerable part brought from slaughter-houses in the country, and have not always been inspected before reaching the City. Hence the fairly large number of seizures in these marts.

At the beginning of the War, special attention was given to possible danger from tinned foods. It was recognised that there might be in the possession of some shopkeepers and wholesale dealers old stocks of tinned foods, the condition of which might be doubtful, but which, owing to the rise in the price of food, might be more readily sold than in ordinary circumstances. The co-operation of all the parties concerned was asked for and cordially given in inspecting such foods and in removing any that might be open to suspicion. A considerable quantity of old tins with contents of doubtful condition were thus removed for destruction.

As usual, the most common cause, apart from tuberculosis, for seizure of carcases—but usually only partial seizures—was bruising, of which there were 131 cases, as against 87 in the preceding year and 103 in 1912. In many cases the bruising seems to be due to want of care in the transport of the cattle to Aberdeen, but it has to be admitted that some amount of accidental bruising is almost unavoidable in the conveyance of the large number of animals slaughtered in the City, some of which are brought by boat from the Northern Islands. In 96 instances, seizure was due to inflammatory conditions, usually of internal organs, such as the lungs and uterus, or of the pleura or peritoneum. Other causes for seizure were septicaemia, suffocation, emaciation, dropsy, and decomposition. There were four cases of anthrax and quarter-ill and one case of actinomycosis.

The quantity of fish seized during the year was upwards of 12 tons, but represented only a very small proportion of the weight of fish landed in Aberdeen, which amounted to no less than 152,000 tons, as compared with 113,000 tons in the preceding year, when 21 tons were seized.

Public Health (Unsound Food) Regulations, and Public Health (Foreign Meat) Regulations (Scotland).—The unloading berths and shipping sheds of the docks were visited daily by one of the meat inspectors, but no occasion arose for taking action under the regulations. Very little food, apart from cereals, is imported or shipped direct to Aberdeen.

WEATHER AND DISEASE.

(Tables XVI. and XVII.)

In Table XVI. is summarised the state of the weather for each month throughout the year, along with the average for the fifteen years 1897-1911. In order to enable a comparison to be made between the weather and the mortality in the City, a second table (Table XVII.) containing the number of deaths in each month from the more important diseases is supplied, along with the average numbers for the preceding ten years. The figures in this table have been corrected for transferred deaths. The number of persons dying at each age-period during each month is also given.

The meteorological averages for the fifteen years show that, in Aberdeen, February, with a temperature of 38·1 deg. F., is the coldest month, and that July, with a temperature of 56·5 deg. F., is the warmest, the difference between the two amounting to only 18·4 deg. This is a small range, and is less by 5 deg. than the range of temperature at London, and is greatly less than in almost any part of the European Continent. In 1914, July was also the warmest month, with a temperature of 57·3 deg., but the coldest month was December, with 37·8 deg., the temperature having been exceptionally low during that month. The difference between the warmest and the coldest month was 19·5 deg., or somewhat above the average.

The mean temperture for the whole year is, on an average for the fifteen years, 46·3 deg. In 1914, it was 47·4 deg.

The mean daily range of temperature in Aberdeen, or the difference between the highest and lowest for the day, is 9·7 deg. for the whole year, being greatest from April to September, with monthly means of 10·4 to 11·3 deg., and least in December, with 7·6 deg. In 1914, the mean daily range for the whole year was 10·2, and, therefore, above the average, while the monthly means in April to September varied from 9·5 to 13·7 deg., and the month with the lowest mean was January, with 6·8 deg.

As regards sunshine, the month which, on an average, enjoys the most sunshine is May, with 181 hours for the whole month, or about six hours a day, while the month with the least sunshine is December, with only 34 hours for the month, or slightly over one hour a day.

During 1914, the month with the largest amount of sunshine was April, with 200 hours, or about seven hours a day. This month was favoured with an exceptional amount of sunshine. The month with the lowest sunshine was January, with 28

TABLE XVI.—ABERDEEN.—METEOROLOGICAL RECORD FOR EACH MONTH (From King's College Observatory).

YEAR 1914.

MONTH.	BAROMETRIC PRESSURE (at 32° F. and Sea Level).			TEMPERATURE OF ATMOSPHERE.				Mean Daily Temp. of Ground (4 feet below surface)	RELATIVE HUMIDITY. Sat. = 100.	RAIN-FALL (If Snow, indicate by S.)		SUNSHINE.		*WIND.									
														DIRECTION; AND DURATION IN HOURS.									Velocity
	Absolute Highest	Absolute Lowest.	Mean Daily Range.	Absolute Highest	Absolute Lowest.	Mean Daily Temp.	Mean Daily Range			Duration.	Amount	Duration.	Percentage of possible Sunshine.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Average No. miles per day.
	Inches.	Inches.	Inches.							Hours.	Inches.	Hours.											
January, . .	30·74	29·05	0·25	54·0	29·3	39·3	6·8	40·2	80	65	1·4	28	13	25	15	7	91	**204**	**203**	**156**	43	...	204
February, .	30·07	28·52	0·31	53·4	30·8	42·4	8·1	40·9	83	54	2·3	64	24	...	12	16	**116**	**321**	**128**	66	13	...	219
March, . .	30·09	28·73	0·24	56·2	29·2	39·9	9·1	40·6	80	112	3·0	106	29	12	17	65	**135**	76	**139**	**171**	**129**	...	244
April, . .	30·50	28·89	0·21	67·9	33·8	47·0	13·7	43·1	72	32	0·7	200	47	11	25	16	**119**	**193**	**179**	**120**	57	...	195
May, . .	30·50	29·23	0·21	71·2	31·1	48·5	13·3	47·1	74	104	2·7	159	31	58	39	31	**102**	**165**	89	**110**	**150**	..	180
June, . .	30·33	29·66	0·14	77·6	37·5	54·2	12·6	50·7	77	34	0·8	192	37	86	89	76	93	73	60	**103**	**140**	...	167
July, . .	30·30	28·97	0·18	74·4	46·2	57·3	9·5	54·9	82	76	4·1	130	25	28	20	**110**	**178**	**140**	28	91	**149**	...	166
August, .	30·43	29·38	0·15	74·5	45·0	57·2	10·3	54·9	80	65	1·5	168	36	4	67	**124**	**163**	**252**	90	38	2	4	136
September, .	30·41	29·05	0·21	69·0	40·2	53·3	12·9	54·2	76	72	1·3	133	35	27	11	14	**102**	**198**	**111**	**155**	**102**	...	183
October, . .	30·39	29·46	0·18	62·9	31·5	48·9	9·9	51·1	84	111	2·0	64	21	16	28	**123**	**133**	**153**	66	**144**	80	1	197
November, .	30·63	28·85	0·26	56·7	27·4	43·3	8·0	47·7	85	142	3·7	49	21	8	17	49	80	**159**	**117**	**240**	49	1	237
December, .	30·22	28·53	0·36	50·1	22·9	37·8	8·1	43·1	81	156	5·3	43	21	14	24	97	75	**169**	**161**	**155**	49	...	303
Monthly Average	30·38	29·03	0·23	64·0	33·7	47·4	10·2	47·4	80	85	2·4	111	28	24	30	61	116	175	114	129	80	0·5	203
Total for Year, .	...	...	...	...	...	...	...	...	...	1023	28·8	1336	...	289	364	728	1387	2103	1371	1549	963	6	...

AVERAGE FOR FIFTEEN YEARS, 1897-1911.

MONTH.	BAROMETRIC PRESSURE (at 32° F. and Sea Level).			TEMPERATURE OF ATMOSPHERE.				Mean Daily Temp. of Ground (4 feet below surface)	RELATIVE HUMIDITY. Sat. = 100.	RAIN-FALL (If Snow, indicate by S.)		SUNSHINE.		*WIND.									
														DIRECTION; AND DURATION IN HOURS.									Velocity
	Absolute Highest	Absolute Lowest.	Mean Daily Range.	Absolute Highest	Absolute Lowest.	Mean Daily Temp.	Mean Daily Range			Duration.	Amount	Duration.	Percentage of possible Sunshine.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Average No. miles per day.
January, .	30·61	28·80	0·31	52·0	24·9	38·6	7·9	40·7	80	72	1·9	48	21	21	7	15	56	**162**	**234**	**145**	**104**	0·1	238
February, .	30·50	28·70	0·30	51·8	23·7	38·1	8·6	39·4	79	75	1·9	81	31	27	8	20	42	**146**	**159**	**138**	**134**	...	239
March, . .	30·37	28·88	0·26	54·6	25·4	40·0	9·1	40·0	78	101	2·3	109	30	57	32	45	90	**145**	**134**	**105**	**135**	0·4	232
April, . .	30·41	29·10	0·23	59·1	30·0	42·9	10·4	42·1	78	93	2·3	157	38	53	31	54	**105**	**155**	95	**100**	**127**	0·2	225
May, . .	30·43	29·12	0·19	64·9	34·7	47·4	10·7	45·5	78	93	2·6	181	37	**102**	64	80	**100**	**140**	73	66	**118**	0·8	197
June, . .	30·40	29·38	0·15	69·2	38·5	52·7	11·1	50·1	78	62	1·7	178	34	91	53	92	**113**	**137**	77	50	**121**	0·4	175
July, . .	30·35	29·37	0·18	73·0	43·5	56·5	11·3	53·1	77	74	2·5	163	31	68	50	77	99	**137**	89	89	**133**	0·8	164
August, . .	30·28	29·27	0·19	72·1	42·6	56·0	11·0	54·3	79	76	2·6	155	34	51	37	60	**100**	**170**	**116**	88	**122**	0·9	165
September, .	30·42	29·23	0·19	68·3	37·8	53·5	11·3	53·0	80	67	2·0	129	34	41	23	36	85	**175**	**122**	**114**	**125**	0·6	174
October, . .	30·46	28·98	0·24	62·2	33·1	47·8	9·6	50·3	82	97	2·8	95	30	39	21	39	89	**174**	**145**	**110**	47	...	206
November, .	30·44	28·81	0·27	55·3	27·3	42·7	8·2	46·5	82	103	2·9	56	24	35	8	23	71	**146**	**166**	**145**	**121**	...	233
December, .	30·45	28·59	0·30	53·2	25·2	39·9	7·6	42·9	82	117	3·2	34	17	25	6	25	**101**	**176**	**201**	**132**	86	0·1	237
Monthly Average	30·43	29·02	0·23	61·3	32·2	46·3	9·7	46·5	79	86	2·4	116	30	51	28	47	88	155	134	107	114	0·4	207
Total for Year, .	...	...	...	...	...	...	...	...	...	1030	28·7	1386	...	610	340	566	1051	1863	1611	1282	1373	4·3	...

* To indicate the dominant direction, every duration of 100 hours and upwards is in thick figures.

TABLE XVII.—ABERDEEN.—NUMBER OF DEATHS FROM PRINCIPAL CAUSES IN EACH MONTH.

(Corrected for transferred deaths.)

MONTH.	BIRTHS.	CAUSE OF DEATH.																			AGES OF PERSONS DYING.								Average Age at Death.
								TUBERCULOSIS.														YEARS.							
		Measles.	Whooping Cough.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Influenza.	Lungs (Phthisis).	Brain (Tub. Meningitis).	Abdomen (Tab. Mesenterica Tub. Peritonitis).	Other.	Dis. of Digest. System (incl. Diarrhoea).	Pneumonia.	Bronchitis.	Diseases of Circulatory System.	Diseases of Urinary System.	Cerebral Apoplexy and Hemiplegia.	Convulsions.	Prematurity.	Malignant Diseases.	Under 1 Year.	0—5	—15	—25	—45	—65	65+	All Ages.	
YEAR 1914.																													
January,	325	1	1	11	17	0	7	10	4	1	3	21	19	23	48	12	13	2	9	20	54	84	21	10	30	65	95	305	41·3
February,	312	0	0	2	17	1	1	8	4	2	3	18	19	11	26	7	10	7	13	18	58	78	16	15	19	33	59	220	33·7
March,	359	0	3	4	10	0	8	23	3	4	2	25	19	12	37	8	20	6	7	22	52	75	10	17	28	56	90	276	41·0
April,	366	0	2	1	6	0	3	18	3	0	3	27	19	17	34	11	20	7	6	8	43	62	12	16	29	60	62	241	39·5
May,	332	0	2	2	7	0	1	16	4	2	5	19	15	10	26	6	17	1	9	20	39	60	11	10	27	48	62	218	42·1
June,	358	0	1	1	7	0	4	19	3	4	3	16	12	11	37	8	18	1	6	8	33	44	14	14	36	41	59	208	41·0
July,	326	0	0	2	3	0	2	7	2	1	2	17	6	5	33	11	11	0	7	12	31	43	11	9	22	29	60	174	41·7
August,	355	1	1	4	4	0	0	13	5	2	0	20	14	6	31	8	9	3	8	20	34	50	19	11	23	29	58	190	39·5
September,	288	1	1	8	12	1	3	12	1	1	3	15	9	2	30	6	17	7	7	11	30	57	16	7	20	39	52	191	38·0
October,	386	0	1	16	23	0	1	15	1	0	2	21	9	8	33	10	9	4	12	14	41	67	24	8	29	37	65	230	37·4
November,	323	2	0	21	13	0	4	12	5	2	3	21	19	10	37	7	10	3	10	12	41	71	21	15	30	46	60	243	35·5
December,	327	1	0	12	14	1	2	18	1	0	0	17	17	9	40	9	14	3	9	20	31	55	20	12	25	60	84	256	43·5
Total for year 1914,	4057	6	12	84	133	3	36	171	36	19	29	237	177	124	412	103	168	44	103	185	487	746	195	144	318	543	806	2752	39·5
AVERAGE FOR PRECEDING TEN YEARS—1904-13.																													
January,	388	8	8	2·1	3·9	0·6	2·6	15	3·3	1·9	3·4	18	25	26	29	8	15	5	10	15	62	93	10	10	32	49	74	268	36·8
February,	343	2·9	10	1·0	2·8	0·3	7	18	2·8	1·8	2·6	17	21	24	26	9	15	5	10	14	55	80	10	10	27	45	72	244	38·9
March,	396	3·2	9	1·7	2·8	0·4	6	19	4·4	3·4	2·4	17	23	22	32	9	12	6	9	15	55	85	10	12	31	46	72	256	37·6
April,	388	4·2	7	0·8	1·5	0·5	2·5	18	5	3·3	2·3	14	18	16	28	8	11	6	9	13	52	75	10	11	26	41	60	223	36·9
May,	394	8	8	0·7	1·3	0·5	1·5	18	6	3·2	2·3	17	14	11	26	9	12	5	9	15	50	75	10	11	27	40	61	224	37·5
June,	387	5	7	0·1	1·4	0·2	1·7	18	3·7	3·2	2·8	17	13	9	26	7	10	3·5	7	12	40	60	8	11	27	35	52	193	37·2
July,	367	2·7	5	0·9	1·4	0·2	0·3	13	3·3	2·9	2·0	13	12	6	24	5	11	4·7	8	15	35	51	8	9	20	34	50	172	38·8
August,	345	2·1	2·9	0·9	2·5	0·2	0·6	13	3·4	1·7	2·2	18	9	6	23	8	12	3·5	9	15	41	55	7	9	21	36	52	180	38·5
September,	344	0·7	3·3	1·9	2·3	0·3	0·1	13	2·5	2·0	2·6	23	12	6	20	7	9	2·4	8	14	44	60	8	9	22	36	44	179	35·8
October,	374	4·1	2·1	2·7	3·3	0·6	0·9	14	2·8	1·0	1·7	17	11	10	23	7	11	4·3	9	12	47	65	8	9	23	38	48	191	36·5
November,	349	11	3·6	1·6	3·8	1·2	1·6	13	2·9	2·7	2·0	17	16	13	27	6	12	3·4	10	17	51	75	8	9	21	45	60	218	38·0
December,	364	13	5	2·1	4·1	0·4	3·1	15	2·2	2·5	1·5	18	22	25	27	8	13	6	11	14	67	97	9	10	23	43	67	249	35·3
Average Total for 1904-13,	4439	65	71	17	31	5	28	187	42	30	28	206	196	174	311	91	143	55	109	171	599	871	106	120	300	488	712	2597	37·3

hours, or slightly less than one hour a day. Although December, as has been remarked, was an exceptionally cold month, it was considerably more sunny than usual.

The average yearly amount of sunshine for the years 1897-1911 was 1,386 hours. In 1914, the total sunshine was 1,336 hours. The driest month, on an average, in the year is June, with 1·7 inches of rainfall, while December is the wettest month, with nearly twice as much rain. In 1914, the driest month was April, with only 0·7 inches of rainfall, while the wettest was December, with 5·3 inches.

The average total rainfall in Aberdeen is 28·7 inches. In 1914, it was 28·8 inches, or almost exactly the same as the average. The average total annual number of hours of rainfall in Aberdeen is 1,030, or an average of nearly three hours daily. In 1914, the total was 1,023 hours, or practically the same as the average.

The most prevalent winds in Aberdeen are from the south and south-west. In 1914, the proportion of southerly winds was greater than usual, but the proportion of south-westerly winds was distinctly less than usual, westerly winds coming next to southerly winds in degree of prevalence. The least prevalent winds in Aberdeen are, ordinarily, easterly winds and northerly winds. In 1914, northerly winds were distinctly less prevalent than usual, but easterly winds were somewhat more prevalent. The month in Aberdeen with distinctly the largest proportion of northerly winds is May; but, in 1914, June had a larger share than May of such winds. Easterly winds are usually most prevalent in May, June, and July, but in 1914 they were much more prevalent in July, August, and October. Easterly winds, although having the reputation of being nearly always colder than other winds, are not uncommonly in the winter months in Aberdeen warmer, though moister, than westerly winds. The apparent coldness of the weather depends much on the velocity of the wind as well as on the actual temperature of the atmosphere.

There is not any very easily discerned relationship, so far as the accompanying tables go, between wind, temperature, and humidity, on the one hand, and diseases, on the other hand, such as pneumonia and bronchitis, that are popularly supposed to originate in chills, beyond the broad fact that deaths from both these diseases are distinctly more numerous in the winter months of the year than in the summer months, this being specially true of bronchitis.

I have previously drawn attention to a somewhat unexpected association, during some of the more recent years, between the amount of sunshine and deaths from pulmonary tuberculosis. Thus, in 1911, with a total of 1,518 hours of sunshine, the death-rate from this disease was 116 per 100,000 of population; in 1912, with an exceptionally low total sunshine of 1,097 hours, the death-rate was 95; while in 1913, with a medium amount of sunshine (1,241 hours), it was 105. In 1914, with also a medium amount of sunshine, the rate was 104. Such a concurrence of a low phthisis death-rate with a low amount of sunshine extends back through practically every year to 1903, but for the ten years preceding 1903 the association was reversed.

It has been suggested by some authorities that there is a relationship between the rise of the ground temperature and an increased prevalence of diarrhœa, especially among infants. The ground temperature in 1914 was somewhat higher than usual in the late summer months, but it was not associated with any unusual increase of deaths from diarrhœa.

The exceptionally large number of deaths from diseases of the heart and blood vessels during 1914 was noticeable in practically every month of the year, and could not reasonably be attributed to recognisable climatic changes.

Usually there is no definite relationship between zymotic prevalence and climatic conditions beyond the usual seasonable changes, but it may be noted that the exceptionally large amount of sunshine in April of 1914 did not appear to have materially accelerated the reduction of zymotic prevalence that usually occurs at the commencement of spring; nor was it associated with any reduction of deaths from pneumonia and bronchitis. On the contrary, there was a considerable increase of deaths from bronchitis in April, when compared with the preceding month. There was also an exceptional number of deaths from diarrhœa and other digestive diseases in April, which, however, is the kind of relationship most to be expected for these diseases.

HOUSING.

The former practice of making a full sanitary inspection of every house in which cases of diphtheria, typhus fever, typhoid fever, puerperal fever, and epidemic cerebro-spinal meningitis had occurred has been modified for the last three years in so far as that drainage tests are being omitted in the case of houses the drainage of which had been inspected or overhauled within the preceding two or three years, and had been at that time left in good condition. The same modification is being applied also to houses in which cases of phthisis and deaths from scarlet fever have taken place.

Since the commencement of the fuller organisation for dealing with tuberculosis, a complete examination and record has been made of the sanitary condition of all houses in which tuberculous cases occurred. This system is now a permanent part of the administrative arrangements in connection with tuberculosis. The record for each house is entered on a special card, and the information obtained is forming the basis of a considerable amount of sanitary improvement, although it is gratifying to be able to state that in a large proportion of the houses so examined no obvious sanitary defects such as could be dealt with by the Health Department are being found. During the year, 797 houses were thus surveyed in connection with tuberculosis. Surveys are also made of such of the workshops in which tuberculous cases have been employed as give reason for suspecting that the conditions of employment may have been associated with the occurrence or advancement of the disease.

These surveys are in addition to the usual numerous inspections carried out day by day by the Nuisance Inspectors within their individual districts. The number of these inspections and the nature of the defects found and dealt with are given in the monthly and annual reports of the Sanitary Inspector.

During the year, the special survey or inspection of the older houses in the town was continued. Of 563 houses thus specially inspected, 22 were recommended by the Sanitary Inspector and myself to the Town Council for closure under the local Act of 1881. The Town Council in every case acted on our recommendation, which had previously been confirmed by the Public Health Committee after visiting the houses proposed to be closed. The houses, were, as usual, old houses, and more or less dilapidated. Most of them were defectively lighted, and several were damp. In some instances, the insanitary condition of the house as a dwelling was intensified by the ceiling being unduly low—under seven feet. The houses dealt with were situated in the Gallowgate, West North Street, Young Street, Berry Street, Loch Street, Guestrow, Netherkirkgate, and Upper Denburn, and were, therefore, confined to the more central and older parts of the City.

In addition to the properties thus closed under local Acts by the Town Council on report by the Sanitary Inspector and myself, 12 dwellings in Garden-nook Close were voluntarily closed by the owners after certain communications between them and the Health Department. The houses were old, with small rooms and low ceilings, and it did not appear desirable to request the owners to incur expenditure in making good certain sanitary defects.

During the year, certain back houses in Winlaw's Court, Gallowgate, which some years ago had been closed by the Town Council as unfit for human habitation, were voluntarily demolished by the owner at the request of the Health Department.

In addition to the dwellings closed as stated, 11 underground rooms were shut up under the Public Health Act, and 48 undersized rooms were closed under local Acts.

No action was taken under the Housing of the Working Classes Acts, as the powers under the local Acts were found to be sufficient in all the cases requiring to be dealt with.

During the year, 361 cases of overcrowding were dealt with, as against 257 in the preceding year. The closer attention now being given to tuberculosis has assisted in discovering a larger proportion of the cases of overcrowding in the City. There are very few serious cases of overcrowding, as measured by the standard of 400 cubic feet for each adult and half such space for each child under ten years. Usually the overcrowding is constituted by the presence of only one child beyond the permissible number. The overcrowding is usually remedied either by removal to a larger house or by an older member of the family going into lodgings.

In connection with the various inspections of houses during the year, a large number of notices were issued by the Sanitary Inspector dealing with drainage and sanitary conveniences, dilapidations, improvements of ventilation and lighting, want of cleanliness, dampness, overcrowding, and paving of passages and courts. Altogether, 6,054 intimations were issued under the Public Health Act, which, in about one-sixth of the cases, had to be followed up by notices under the authority of the Town Council because of the intimations not being complied with. In the ultimate result, practically all the more important requirements of the Health Department were met, and in some instances, where the requirements were not complied with, the houses were subsequently not let. Details of the various matters dealt with are given in the report of the Sanitary Inspector.

A large amount of work continues to be done by the Department in inspecting the windows of houses, especially the older houses, for the purpose of seeing that the sashes are so hung or arranged as to admit of their being easily opened for purposes of ventilation. These inspections have largely followed upon the administrative efforts of the Department in regard to the care of tuberculous cases, but they are by no means confined to houses occupied by such cases. Altogether, the windows of 1,134 rooms were thus dealt with during the year. In the preceding year, the number of windows so dealt with was 992. Altogether, during the past five years, the windows of 4,443 dwelling apartments have been altered so as to be conveniently and easily opened, either by balancing of sash or by a pulley and cord arrangement.

It has also been the practice of the Health Department within recent years to insist, in so far as practicable, on the opening out of closed-in or boxed beds. Although the powers for dealing with such beds are not very explicit, not much trouble has been experienced in persuading the owners of the properties to have the necessary alterations made. The difficulty is considerably reduced when a case of such a disease as tuberculosis has occurred in the house. The number of beds thus opened out during the year was 34.

Towards the end of the year I had the privilege, on the invitation of the Royal Commission on Housing (Scotland), to submit evidence regarding the housing conditions in the City of Aberdeen. A full *précis* of the evidence was previously placed in the hands of the Commission, and is to appear in their forthcoming report.

Perhaps the most interesting part of the information submitted to the Commission related to the proportion of wages expended on rent in Aberdeen. As, owing to the War, the issue of the Report by the Commission may be delayed for some time, the Commission will probably not take objection to my introducing here some of the information supplied. It was obtained from an inquiry early in 1914 into the rental and wages of upwards of a thousand households of the working classes in Aberdeen. At the same time, information was also got as to the number of inmates in each house, the occupation and sex of the householder, the number of rooms in the house, the floor area of the house, and its condition as to cleanliness, &c. The houses selected were intended, in so far as possible, to give a fair representation in kind and proportion of houses inhabited by the working and the poorer classes in the City.

The results of the inquiry showed that, out of a total of 1,091 householders regarding which information was obtained, exactly 100 households, or about 9 per cent., were not able to maintain themselves by their earnings. But of these so circumstanced, fully one-third, to judge from the rent paid, were not in extreme poverty. These were mostly cases of old persons receiving assistance from sons or daughters, and included a few persons living on savings or legacies. If these be omitted, the very poor are reduced to about 6 per cent. of the total households. But to these should certainly be added such persons or households as were found to be maintaining themselves on 10s. a week or less. These numbered 15, and raised the percentage of very poor households to between 7 and 8. Households with weekly earnings of 10s. to under 15s. numbered 41, or about 4 per cent. of the whole, while households with 15s. to under 20s. amounted to 63, or 6 per cent.

Roughly, about 18 per cent., or one in every five or six households, had a weekly income of less than 20s.; 17 per cent. had an income of 20s. to under 25s.; and 20 per cent. an income of 25s. to under 30s.

The remainder, amounting to rather less than one-half of the whole, had a weekly income of 30s. and upwards. As might have been expected, the householders with the very low earnings were mostly women. Out of 32 householders who earned their own living and were not getting any definite extraneous help, and the total earnings of whose households were under 12s. 6d. a week, there were 27 women.

The average weekly rent, including occupiers' rates, paid by the several groups of households, arranged according to the amount of the earnings of the household, was found to be 1s. 6d. for those with earnings of under 10s. a week, and was remarkably even at 2s. 5d. to 2s. 7d. for each of the four succeeding groups with earnings of 10s. to under 12s. 6d., 12s. 6d. to under 15s., 15s. to under 17s. 6d., and 17s. 6d. to under 20s. For the higher groups the average rent rose gradually from 3s. per household for the group with earnings of 20s. to under 25s. a week to 4s. 9d. for households with earnings of 50s. a week and upwards.

It is obvious that the proportion which the rent bore to earnings in the various groups was very unequal, and that the poorest were by far the most heavily hit. It was possible to classify the wage-earners into three divisions, namely, (A) a division embracing 283 households with a weekly income of 35s. and upwards, whose rent amounted to 10 per cent., or one-tenth, of their income; (B) a division embracing 589 households with an income of 17s. 6d. to under 35s., whose rent ranged from 12 to 13 per cent., or about one-eighth, of their income; and (C) a division of 67 households with an income of under 17s. 6d., for whom, as the income declined, the percentage of income required for rent rose step by step from 15 per cent., or one-seventh, for the group with 15s. to under 17s. 6d., to 23 per cent., or nearly one-fourth, for the group with earnings under 10s.

The burden of the rent is obviously very real and oppressive for the poorest classes, even when living in the lowest rented houses available in the City. All the householders in Division C, except two, were living in one or two-roomed houses—about one-half being in one-roomed houses. The average weekly sum available per inmate—not per household—for personal maintenance, that is, for food and clothing, after deductions for rent, fire, and light, was worked out for the different groups, the cost of fire and light being estimated at half the rental. Such an estimate enables account to be taken of the number of persons to be maintained, after deduction of the common outlay on fire and light, which, in smaller houses, varies little with the number of inmates composing the household.

Results were thus arrived at which, while accentuating the unhappy position of the very poorest group in Division C—that is, the group with less than 10s. weekly—helped to smooth in some degree the inequalities in the next three higher groups.

Thus it was found that the poorest group was left with only 1s. 8d. per inmate for food and clothing. This is obviously an impossible sum. The persons in this group were nearly all of them, charwomen and cleaners, and probably they had perquisites in food and left-off clothing from kindly employers, and occasional charitable gifts that were not disclosed to us in our investigation. As regards the next three groups, it was interesting to find that the group with average earnings of 10s. to under 12s. 6d. a week had, on account of the smaller households, slightly more to spend per inmate on food and clothing than the next two higher groups—12s. 6d. to 15s. and 15s. to 17s. 6d. These three groups differed little as to the amount available for food and clothing. It ranged from 3s. to 3s. 5d. per inmate. Within these groups, the increase of earnings had almost kept pace with the increase of family.

At all the groups with earnings above 17s. 6d. the sum available for maintenance was not less than 4s. 2d. per inmate—the sum for the group with earnings between 20s. and 25s. For the group with earnings between 17s. 6d. and 20s., it was 4s. 7d.; for the group with earnings between 25s. and 30s., 4s. 10d.; for the group with earnings between 30s. and 35s., 5s. 6d.; for the group with earnings between 35s. and 40s., 7s.; for the group with earnings between 40s. and 45s., 6s. 2d.; and for the group with earnings of 45s. and upwards, 5s. 11d., or rather less than for the immediately preceding group, because of a relatively larger number of inmates per house.

WATER SUPPLY.

A limited series of tests made in the spring of 1913 on the water supply of the City had demonstrated the practicability of the suggestion of Dr. A. C. Houston, Water Examiner to the Metropolitan Board, to purify the whole water supply by the continuous addition of a small proportion of free lime to the water in its passage from the River Dee to the City. The proportion of lime used in these tests was 3 parts of freshly burned, non-hydrated lime per 100,000 parts of the water, or, roughly, about two grains per gallon. This proportion was found to be amply sufficient to destroy the usual disease-producing organisms in water, as judged by the disappearance of the colon bacilli, which, although themselves not ordinarily productive of disease when swallowed, are closely allied to the organisms of typhoid and cholera—the two most important of water-borne diseases.

Laboratory experiments had shown that even a considerably smaller proportion of lime was capable of destroying the colon bacilli under laboratory conditions. Experiments on the whole water supply, or a large part of it, were resumed early in 1914, in order to ascertain, under varying conditions of the water supply, to what extent the proportion of lime used in the trials of the previous year might be safely reduced, and at the same time to note the extent of the subsequent carbonation of the lime.

These experiments were considerably affected by the progress, throughout 1914 and 1915, of certain constructional alterations in the waterworks, such as the covering of the principal service reservoir at the City, the remodelling of the settling reservoir at Invercannie, the reconstruction of the two existing sand filters, and the provision of three additional filters.

The results of these investigations, although not quite completed, were submitted to the Water Committee in a joint report by the Water Engineer and myself, in February, 1915, which was accompanied by a statement by Dr. Houston.

The results then reported, and other results obtained subsequently, showed that, after deduction of that portion (about 0·7 to 1·2 parts per 100,000 parts of water) of the added lime which is at once neutralised by the bicarbonates and the other neutralising constituents ordinarily present in the water, the amount of free lime required to destroy the colon bacilli in the course of a seven days' passage of the limed water through the settling reservoirs at Invercannie should, under ordinary circumstances, seldom exceed 0·5 part per 100,000 parts of water, or about one-third of a grain per gallon, and that the whole, or nearly the whole, of this small proportion of free lime would usually have undergone gradual but complete carbonation by the time the water had reached the outlet of the reservoir. If for any reason the rate of the gradual carbonation of the active lime in the course of its passage through the reservoir should be accelerated, and the benefit of a sufficiently long contact between the oragnisms and the lime be diminished, a somewhat larger initial dose of lime would be necessary, but any change in the conditions would develop gradually, and would be ascertainable by simple tests.

Many other incidental points in the use of the lime have been investigated, to which it is unnecessary to refer here.

After receiving the report by the Water Engineer and myself, with the statement of Dr. Houston, in which he strongly advised the use of lime, the Water Committee recommended the Town Council to adopt the scheme known as the Improved Dee Supply with Liming, at an estimated cost of £450,400, and to request the authority of the Council for taking the requisite steps to obtain, under a Provisional Order, the necessary powers to carry out the scheme. The Town Council gave its approval on 15th February, 1915, and the draft Provisional Order was considerd by a small Parliamentary Commission sitting at Aberdeen, in October, 1915. Subject to certain minor adjustments, the Order was approved by the Committee for submission to Parliament, the Council undertaking, after completing the present provisional works, not to proceed further with the execution cf the scheme until after the close of the War.

The main provisions of the scheme are—(*a*) the raising of the maximum daily amount of water to be taken from the Dee from 8,000,000 to 11,000,000 gallons; (*b*) the purification of the whole supply by a combination of the three methods of liming, storage, and filtration; and (*c*) the enlargement and reconstruction or replacement of the existing aqueduct from the Dee to the City, which is in a very unsatisfactory condition.

Already, and immediately previous to the consideration of the Provisional Order, certain parts of the scheme which were urgently required in any case to place the water supply provisionally in a safe condition, had been carried out under powers, and from funds, already possessed by the Council. These improvements consisted of the reconstruction of the two existing filters, which had been out of use for upwards of twenty years, and the provision of three additional filters. The whole of the water supply is now being filtered.

The existing settling reservoir at Invercannie had also been reconstructed, as part of the provisional measures, and its storage efficiency had thereby been improved. The plant for liming the water has also been provided.

These works, along with the increasing care devoted to the inspection and control of all likely sources of pollution of the Dee above Invercannie, place the water supply, even apart from the use of lime, in a safer condition than it has been since soon after the inauguration of the present water supply in 1865.

It is satisfactory in this connection to be able to state that, with the exception of the outbreak of typhoid in the autumn of 1912, which occurred previous to the present improvements of the waterworks, there is no definite evidence of any outbreak of typhoid or other water-borne disease having ever been traceable to the present water supply. As I stated in my special report on the typhoid outbreak in 1912—an outbreak which was admittedly of unusually limited dimensions for a water-borne epidemic—there were reasons, although not absolutely conclusive, for believing that the infection had, on that occasion, been water-borne, especially as it was associated, in point of time, with a peculiar accident to the hospital drain at Aboyne.

Whatever differences of opinion may exist as to the wisdom or unwisdom of a scheme for augmenting and purifying the present water supply, as compared with the undoubtedly more attractive, but more costly, scheme of an entirely new supply from the upper waters of the Avon, it is only fair to the present source of supply to recall that, although it has been reported upon by several eminent engineering and analytical experts within recent years, it has never been unconditionally condemned or set aside. Perhaps the strongest case ever presented against it is to be found in the evidence of the expert witnesses in support of the Avon Bill in 1910, yet each frankly admitted that it was possible to render the present supply safe by an adequate system of purification.

It is also a noteworthy fact that if the presence of typhoid, as the chief water-borne disease in this country, may be taken as offering any measure of the hygienic safety of the water supply, Aberdeen compares satisfactorily with large towns elsewhere. Thus, to compare it with the three other chief towns in Scotland, it will be found that the average yearly death-rates per 100,000 of population, from typhoid, during the ten years (1867-76) almost immediately following the introduction of the present water supply of Aberdeen, were as follows:—

Glasgow.	Edinburgh.	Dundee.	Aberdeen.
48	36	35	40

During the past ten years, ending with 1914, and including, of course, the outbreak in Aberdeen in 1912, the rates for the several towns, in the same order, have been—

8	3	3	3

For the two latest years (1914 and 1915) now available at the time of revising this report, the averages are—

Glasgow.	Edinburgh.	Dundee.	Aberdeen.
7	2	6	1

Glasgow is reckoned to have one of the purest water supplies in the kingdom, the supply having been introduced in 1860. Edinburgh, in so far as it has not been deriving its water from naturally pure sources, has, I believe, been carefully filtering its supply since 1852, while Dundee has had a supply from a naturally pure source since 1875.

It would be unwise to push the comparison of the towns too far. Polluted water is, of course, by no means the only source of typhoid. But the comparison at least proves that whatever may be urged in theory, and quite permissibly on the grounds of sentiment, against the Aberdeen supply as being drawn from a river within an inhabited area, the chances of contracting typhoid by residence in Aberdeen—whatever be the sources of infection—have during the past fifty years been obviously not very different from those in the three other cities, and have been considerably less than in Glasgow, especially in recent years, in spite of the unimpeachable quality of the water supply of that city. Incidentally it will be observed that there has been a striking decline in the typhoid death-rate in each of the four cities.

These observations are not intended to minimise the need for proceeding with the execution of a complete scheme for dealing with the water supply so soon as the exceptional circumstances of the War will allow, but they are intended to lessen the apprehensions which some persons may meanwhile entertain as to the safety of the supply in its present condition.

CITY HOSPITAL.

The City Hospital has since early in 1911 been dealing with cases of tuberculosis in addition to cases of the ordinary zymotic diseases.

Owing to the continued high prevalence of several of the commoner zymotics during the year, the pressure on the accommodation of the hospital was practically as high as it had been in the preceding year, and necessitated considerable crowding of the wards, although, so far as could be judged, without any evil effect, as free ventilation was maintained from continuously open windows. The open window is now nearly as much a feature of the zymotic wards of the hospital as it is of the tuberculosis wards, the practice in the latter having materially influenced the practice in the former.

This is not an appropriate time for advocating an extension of the accommodation at the City Hospital, but there can be no objection to placing on record the opinion, strongly held by all in charge of the hospital, that a considerable increase of ward accommodation is required in order to meet adequately the demands made upon the hospital, not merely in respect of the large total number of cases seeking admission but also in regard to the proper distribution and separation of the increasing variety of cases.

The number of cases admitted to the hospital during the year (2,794) was not far short of the record number (3,050) in the preceding year. The average for the preceding ten years was 1,285. There has been a gradual and indeed rapid increase of cases in each year since 1910, when the number was 975. In 1911, it was 1,636; in 1812, it was 1,991; and in 1913, as stated, 3,050. Since the beginning of 1911, cases of tuberculosis have been admitted to the hospital, and have helped to increase the number of the total patients admitted to the hospital. But the great rise within the last three years is mainly due to an increase of the ordinary zymotic cases.

The daily number of patients under treatment throughout the year varied from 153 to 383, the average daily number being 274. In the preceding year, the daily number ran from 167 to 424, with an average of 265.

In a preceding table (Table XIV.), the proportion of the cases of the three most common notifiable zymotics admitted to hospital has already been given—the proportion being 91 per cent. for diphtheria, 67 for scarlet fever, and 87 for typhoid fever. The corresponding average percentages for the preceding five years were 90 for diphtheria, 82 for scarlet fever, and 94 for typhoid fever. The reduced proportion of admissions in 1914 from scarlet fever was mainly due to insufficiency of accommodation in the hospital.

The accompanying table (Table XVIII.) gives a summary of all the cases admitted during the year, together with a corresponding summary for each of the preceding ten years. As usual, the bulk of the patients were suffering from scarlet fever and diphtheria.

Ordinarily, the cases of scarlet fever are considerably in excess of the cases of diphtheria, but during 1914, as in 1913, the cases of diphtheria were considerably in excess of those of scarlet fever, and this in spite of the fact that the prevalence of scarlet fever was considerably above the average.

Scarlet Fever.—As has already been stated in an earlier part of the report, this disease was exceptionally prevalent during the year. The demand for hospital accommodation was therefore proportionately increased. Owing, however, to the necessity for dealing at the same time with a large number of cases of diphtheria, it was not possible to remove the scarlet fever cases to hospital to the same extent as has been customary when the numbers were smaller, or when the beds of the hospital were not so largely occupied with other kinds of cases. In all, 1,040 cases of scarlet fever were admitted to the hospital during the year. In the preceding year, the admissions were 836, while the average for the preceding ten years was 654. The case-mortality (5·0 per cent.) was distinctly higher than in the preceding year, when it was 2·6, and still higher than the average (2·0) for the preceding ten years. The average had, however, been much reduced by the exceptionally low case-mortality in the four years 1907-1910. The disease exhibited in several cases a distinctly more severe type than has been met with for many years. Of the 52 fatal cases in the hospital, 31 (including 11 dying within one day) died within the

TABLE XVIII.

ABERDEEN.—CITY HOSPITAL.—ANNUAL SUMMARY, 1914.

ZYMOTIC ADMISSIONS AND DEATHS DURING EACH YEAR FROM 1904 TO 1914 INCLUSIVE.

DISEASE.		1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1904-1913.	
													Total	Annual Average
Small Pox,	Admitted, ...	6	0	0	0	0	0	0	1	0	0	3	4	0·4
	Died, ...	1	0	0	0	0	0	0	0	0	0	0	...	...
	Percent. of Deaths to Admissions, ...	16·7	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	...	...
Scarlet Fever, ...	Admitted, ...	1040	836	883	1025	613	871	1005	448	140	185	534	6540	654·0
	Died, ...	52	22	26	19	7	7	15	4	5	7	16	128	12·8
	Percent. of Deaths to Admissions, ...	5·0	*2·6*	*2·9*	*1·9*	*1·1*	*0·8*	*1·5*	*0·9*	*3·6*	*3·8*	*3·0*	...	2·0
Diphtheria,	Admitted, ...	1473	1911	727	318	272	244	239	174	192	127	131	4435	443·5
	Died, ...	117	105	27	17	32	22	15	14	17	7	9	265	26·5
	Percent. of Deaths to Admissions, ...	7·9	*5·5*	*3·7*	*5·3*	*11·8*	*9·0*	*6·3*	*8·0*	*8·9*	*5·5*	*6·9*	...	6·0
Typhoid Fever (including Para-Typhoid),	Admitted, ...	12	27	103	33	16	28	10	17	9	13	24	280	28·0
	Died, ...	2	6	10	3	2	2	0	4	0	3	2	32	3·2
	Percent. of Deaths to Admissions, ...	16·7	*22·2*	*9·7*	*9·1*	*12·5*	*7·1*	*0*	*23·5*	*0*	*23·1*	*8·3*	...	11·4
Typhus Fever, ...	Admitted, ..	0	0	0	3	0	0	0	0	0	97	22	122	12·2
	Died, ...	0	0	0	0	0	0	0	0	0	12	1	13	1·3
	Percent. of Deaths to Admissions, ...	0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*12·4*	*4·5*	...	10·7
Measles, ...	Admitted, ...	1	75	17	86	4	7	36	30	50	6	72	383	38·3
	Died, ...	0	18	12	4	0	1	1	11	3	0	1	51	5·1
	Percent. of Deaths to Admissions, ...	0	*24·0*	*70·6*	*4·7*	*0*	*14·3*	*2·8*	*36·7*	*6·0*	*0*	*1·4*	...	13·3
Tuberculosis	Admitted, ...	201	174	188	122	0	0	0	0	0	0	0	484	161·3
	Died, ...	28	31	17	9	0	0	0	0	0	0	0	57	19·0
	Percent. of Deaths to Admissions, ...	13·9	*17·8*	*9·0*	*7·4*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	...	11·8
Other Cases,	Admitted, ...	61	27	73	49	70	63	56	64	54	193	54	703	70·3
	Died, ...	6	6	12	6	9	14	10	14	6	8	7	92	9·2
	Percent. of Deaths to Admissions, ...	9·8	*22·2*	*16·4*	*12·2*	*12·9*	*22·2*	*17·7*	*21·9*	*11·1*	*4·1*	*13·0*	...	13·1
Total Cases,	Admitted, ...	2794	3050	1991	1636	975	1213	1346	734	445	621	840	12851	1285·1
	Died, ...	206	188	104	58	50	46	41	47	31	37	36	638	63·8
	Percent. of Deaths to Admissions, ...	7·4	*6·2*	*5·2*	*3·5*	*5·1*	*3·8*	*3·0*	*6·4*	*7·0*	*6·0*	*4·3*	...	5·0

first week after admission, and 10 within the second week after admission. Well-marked throat conditions were more common than usual, but serious glandular swellings were rare. Kidney disturbances were rather more common than usual, as also rheumatic conditions. The high mortality seemed to be due more to a small proportion of more or less malignant cases than to a general increase in the severity of all the cases. There was, therefore, a suggestion of the existence of a more malignant strain of scarlet fever in the City alongside of the comparatively benign strain met with in recent years. But an examination into the association of the more severe cases, and the possibilities of the occurrence of infection between such cases, did not offer any definite support to the suggestion of the existence of a mixture of strains.

The average stay in hospital of the cases admitted, excluding cases that died, was 41 days, or exactly the same as in the preceding year. Of the 52 patients that died, 16 were under five years of age, 27 were between five and fifteen, and the remaining 9 were above fifteen years. The mortality among children between five and fifteen showed, as compared with the preceding year, a relatively greater increase than the mortality at the other ages, but all ages showed an increase.

Diphtheria was, as already observed, highly prevalent during the year, although not quite so prevalent as in the preceding year, and accounted for 1,473 admissions to the hospital, or slightly more than one-half of the whole hospital admissions. In the preceding year, the number (1911) was considerably higher, and was by much the highest number of diphtheria cases since the hospital was built. The average number of admissions for the ten years preceding 1914 was only 444. The case-mortality (7·9 per cent.) in 1914 was substantially higher than in the preceding year, when it was 5·5, and still higher than in 1912, when it was 3·7. The average for the ten years preceding 1914 was 6·0, but among these years there were four, namely, 1906, 1907, 1909, and 1910, in which the case-mortality was even higher than in 1914. The average stay in hospital of the cases admitted, excluding cases that died, was 22 days, as compared with 25 in the preceding year.

It has to be regretted that, as in preceding years, many of the patients were sent to the hospital at too late a stage for successful treatment. The parents are largely to blame in not summoning medical assistance sufficiently soon. It cannot be sufficiently impressed upon parents and others in charge of diphtheria cases that the success of the specific treatment with antitoxin is greatly increased by the earliest possible use of the remedy. Especially during times of excessive prevalence of diphtheria, it is desirable to regard with suspicion all cases of sore throat in children and at once to seek medical advice. Out of the total of 117 deaths from diphtheria in the hospital, as many as 17 occurred within 24 hours after admission. The majority of these children had been ill for several days before admission, and one cannot but believe that, if these cases had been brought to hospital sooner, the lives of some of them would probably have been saved.

The average duration of the illness in all the patients that died was 10 days from the time of admission. In the preceding year, it was 7 days, and in 1912, it was

12½ days. Of the 117 patients that died, 66 were under five years of age, 46 between five and fifteen, and the remaining 5 above fifteen. The average age of all the persons dying was $5\frac{4}{12}$ years. It is interesting to note that the average age has been gradually rising during the last four years. In 1911, it was $3\frac{2}{12}$; in 1912, $4\frac{1}{12}$; and in 1913, $4\frac{7}{12}$ years.

Out of the total cases treated (1,473), intubation or tracheotomy had to be practised in 36, or about 1 in every 41, as against 1 in every 30 in the preceding year, 1 in every 15 in 1912, and 1 in every 8 in 1911. Of the 36 cases operated on, 20 recovered from the disease. In the preceding year, 65 cases were operated on, with 34 recoveries. It may be safely assumed that scarcely any of these cases would have recovered but for the operation. Of the 36 cases operated on, 27 were treated by intubation of the larynx and 4 by tracheotomy, while in 5 cases both intubation and tracheotomy had to be performed. Of the 27 patients treated by intubation, 8 died. The average age of those intubated was $3\frac{2}{12}$ years. Three of the cases treated by tracheotomy died, the average age of the patients being $7\frac{4}{12}$ years. Only cases unsuitable for intubation were dealt with by tracheotomy. Of the 5 cases on whom both intubation and tracheotomy had to be performed, all died, the average age of the patients being $2\frac{4}{12}$ years. These were bad cases, in which tracheotomy was tried after the effects of intubation had begun to fail, and in which there was only an off-chance that tracheotomy might save life.

In only 30 of the 1,473 cases admitted, or about 1 in 49, had antitoxin been administered before admission. In the preceding year, the proportion was 1 in 24, while in 1911, it was 1 in 17. The Department continues to supply antitoxin gratuitously to medical men and to lend a sterilised syringe.

Typhoid Fever.—Only 12 cases of typhoid were admitted to the hospital during the year, one of which was suffering also from paratyphoid, as appeared from the bacteriological examination of the excreta. In the preceding year, 27 cases were admitted. In 1912, on account of a considerable epidemic of typhoid in the autumn of that year, the admissions rose as high as 103.

Two of the cases admitted during 1914 were of soldiers—one being from the barracks and the other from one of the military hospitals. Two of the 12 patients died.

In accordance with the practice of the hospital for several years, no case was discharged until the urine and stools were found to be free from the typhoid bacillus after two or more successive examinations, the examinations being usually separated by an interval of a week. Owing to the intermittency of the appearance of the bacillus in the excreta of a convalescent typhoid case, two negative examinations are not quite conclusive, but they are about as many as can be expected to be made in the ordinary routine of hospital administration. The justice of this qualification, even when more than two negative examinations were awaited before discharging the patient, was illustrated during the year in one of the soldier cases, to which reference has already been made in an earlier part of the report. This patient was not discharged from the hospital until fifteen weeks after he had become ill, his long stay in the hospital being due mainly to the difficulty in getting his excreta free from the typhoid bacilli. But within about two months after his discharge, the bacilli were once more found in his excreta, and the patient was, after being treated in the hospital for a further period, with doubtful success, discharged from the Army.

Measles.—During the year, only one case of measles was admitted to the hospital, as against 75 in the preceding year. There had been few cases of measles in the City during the year. The age of the patient admitted was 16 years.

Tuberculosis.—No provision for the treatment of tuberculosis has yet been made by the Municipality beyond the accommodation provided in the City Hospital, although the Public Health Committee visited during the year several places within a few miles of the City that had been recommended or offered as suitable sites for the proposed sanatorium for early cases of tubercle. The commencement of the War in August put an end for the time to these inquiries, and no further steps have since been taken. This may prove not to have been a disadvantage, as, meanwhile, a fuller experience is being obtained of the requirements in respect of the care and treatment of cases of tuberculosis.

At the beginning of 1914, the number of beds set apart within the City Hospital, including the shelters erected in 1911 and 1912, was 62. In the course of the year, the approval of the Local Government Board was obtained to the use of the wooden pavilion for the treatment of 40 tuberculosis cases, the windows of the pavilion having been previously in part reconstructed so as to admit of the free ventilation necessary for the proper treatment of tuberculosis. It was in contemplation to admit to the hospital a larger proportion of the notified tuberculous cases than had been practised in the preceding three years, but the outbreak of the War obliged us for a time to vacate certain of the pavilions of the hospital in order to have in readiness some accommodation for the treatment of wounded sailors or soldiers at a time when the Territorial military hospitals in course of being provided in Aberdeen had not yet been put into working order. These Territorial hospitals were improvised from certain of the public schools in the City.

In addition to the cases of tuberculosis admitted to the City Hospital, several were treated in Newhills Sanatorium, within a few miles of the City, and some were treated in the Royal Infirmary and the Sick Children's Hospital and other clinical institutions. The Parish Council continued to deal with practically all the pauper cases in the tuberculous wards of their hospital at Oldmill, and, as already mentioned, the Local Authority made a payment for such cases to the Parish Council under an agreement arrived at early in 1914.

A few cases were also dealt with in institutions outside the City and the surrounding district.

As regards the cases admitted to the City Hospital, they numbered 201, as against 174 in the preceding year. All the cases, except 9, belonged to the pulmonary group, if we include in this group cases of enlargement, probably tuberculous, of the glands at the root of the lungs, with little clinically manifest tubercle in the lungs themselves. These latter cases were almost entirely confined to children.

Of the 192 pulmonary cases admitted to the hospital, 99 were of women and 93 of men, and of the male cases 51, or fully one-half, were insured under the National Insurance Act, while of the female cases 27, or slightly over one-fourth, were insured. These did not include the whole of the insured phthisical persons receiving indoor institutional treatment, as 16 additional cases were treated in Newhills Sanatorium and 31 in other institutions.

Of the 9 cases of other forms of tubercle, 6 were males and 3 were females.

The accompanying table deals with the pulmonary cases discharged during the year, as distinguished from the cases admitted, and includes all cases admitted previous to the beginning of the year that were discharged during the year. This enables the completed hospital record to be made use of for each case included in the summary.

In the table, the whole of the cases have been classified primarily according to the stage of the disease on admission, and secondarily according as they had, at the time of admission, tubercle in the sputum or not, and as to whether they were treated with tuberculin. The results are given for each group and sub-group, in respect of duration and stay in hospital, increase or decrease of weight, condition of lungs, state of general health, bacilli in sputum, and fitness for work. The cases are, however, too few to allow of any very definite generalisation as to results.

It has to be noted that the cases in the first group include 21 children under thirteen years of age, that the second group contains 28, and the third group 2 such children. If these young patients are excluded from each group, 5 cases remain in the group of First Stage cases, 15 in the group of Second Stage cases, and 123 in the group of Third Stage cases. Attention has already been directed in the general report to the regrettable fewness of the cases notified in the First Stage of the disease, especially among patients beyond childhood. Practically no difficulty has been experienced in persuading cases to enter the hospital for treatment, provided the Tuberculosis Medical Officer is satisfied that the treatment could be more satisfactorily procured in the sanatorium wards of the hospital than in the patients' own homes or in the outdoor department of the hospital.

As to the results of the treatment of the 194 cases of pulmonary tuberculosis discharged from the City Hospital during the year, they are shown in the accompanying table (XIX.) and may be stated broadly as follows:—85 per cent. of the total cases, or between eight and nine out of every ten, had increased in weight at the time of discharge by, on an average, fully half a stone; 76 per cent., or almost exactly three in every four, had improved more or less in general health, the improvement in many cases being substantial; 26 per cent., or about one in every four, showed an improvement in the lung condition; and abont 59 per cent., or three in every five, were considered to be fit for work, although not, in the majority of cases, for a full day's hard work,

TABLE XIX.—ABERDEEN CITY HOSPITAL.—CASES OF PULMONARY TUBERCULOSIS DISCHARGED DURING 1914.

ON ADMISSION.							ON DISCHARGE.																
Stage of Disease.	No. of Cases.	Tubercle Bacilli in Sputum.		Tuberculin Treatment.		*Average Stay in Hosp. (Days.)	Weight.				General Health.				Lung Lesion.				Tubercle* Bacilli in Sputum.		Fit for Work.		Died in Hosp.
							Gain.		Loss.														
		Abs.	Pres.	No.	Yes.		Cases.	Aver. (lbs.)	Cases.	Aver. (lbs	Much Improved.	Improved.	Stationary.	Worse.*	Much Improved.	Improved.	Stationary.	Worse.*	Abs.	Pres.	Yes.	No.	
I.	26†	26	...	20	...	101	20	*5*	...	...	5	15	...	...	...	4	16	...	20	..	20	...	...
				...	6	150	6	*5*	...	...	5	1	...	...	...	3	3	..	6	...	6	...	...
		...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
				...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
	Totals	26	...	20	6	112	26	5	...		10	16	...	..	...	7	19	...	26	...	26	...	...
II.	43‡	39	...	35	...	129	34	*8*	1	*5*	16	16	3	...	2	8	25	...	35	...	31	4	...
				...	4	144	4	*10*	..	...	2	2	...	...	...	1	3	...	4	...	3	1	...
		...	4	3	...	88	3	*9*	...	..	2	1	...	...	...	1	2	...	...	3	1	2	...
				...	1	203	1	*11*	...	...	1	...	..	...	...	1	...	..	1	...	1		...
	Totals	39	4	38	5	130	42	8	1	5	21	19	3	...	2	11	30	..	40	3	36	7	...
III.	125§	26	...	24	...	101	22	*11*	2	...	14	6	2	2	...	11	11	2	24	...	16	6	2
				...	2	160	2	*10*	...	...	1	...	1	...	...	....	2	...	2	...	1	1	...
		...	99	84	...	116	58	*10*	26	...	20	29	10	25	...	15	48	21	5	79	23	41	20
				...	15	276	14	*8*	1	*22*	8	4	...	3	...	5	8	2	2	13	10	3	2
	Totals	26	99	108	17	133	96	10	29		43	39	13	30	...	31	69	25	33	92	50	51	24
ALL STAGES.																							
Grand Totals	194	91	103	166	28	129	164	8	30	...	74	74	16	30	2	49	118	25	99	95	112	58	24

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* Includes cases that died.
† Including 21 cases under 13 years of age.
‡ Including 28 cases under 13 years of age.
§ „ 2 „ „

These results are quite satisfactory, in so far as they reveal a large proportion of cases that have benefited in their general health and in their fitness for work. On the other hand, they reveal only a relatively small, though by no means negligible, proportion in whom the actual lung disease showed definite signs of improvement. In no case could it be said that the improvement was so marked as to justify the use of the word "cured." Tubercle is a disease of nearly always very slow onset and growth, and recovery from it is usually still more slow. Great results are not to be expected after a stay of a few months in a sanatorium. The average stay of cases in the City Hospital in 1914 was 129 days, or fully four months, and is probably above the average for similar institutions elsewhere. The chief result to be hoped for is that the disease itself may be turned from a progressive to a retrogressive condition. But the maintenance of that retrogressive condition will almost entirely depend on the subsequent care which the patient, after leaving the hospital, is able to secure for himself in regard to good and sufficient food, satisfactory housing conditions, suitable employment—neither too hard nor too sedentary—and freedom, so far as possible, from harassing cares.

In many respects, the real problem of dealing with a tuberculous case begins only after the patient has left the sanatorium, and it is especially here that the work of the Tuberculosis Visiting Staff, backed as it is by the ordinary resources of the Health Department, is valuable. It is to be hoped that, after the all-engrossing demands of the War are over, it may be possible to give still more attention to this part of the treatment.

It is interesting to note, in regard to the cases treated during the year, the extent to which cases with tubercle bacilli in the spit lost such bacilli in the course of treatment in the hospital. The infectiousness of a case of pulmonary tubercle is assumed to be entirely dependent on the presence of such bacilli in the sputum; and however much a case may improve clinically in respect both of general health and local lung condition, the case still remains dangerous from the public health standpoint if the spit continues to contain the bacilli. Of the 194 cases of all stages of pulmonary tuberculosis treated during the year, 47 per cent., or slightly under one-half, showed no bacilli in the sputum when the patient came under treatment. By the time the patients left the hospital, the percentage showing no bacilli had increased to 51; or, to put it in another, and perhaps clearer way, out of 103 cases entering the hospital with bacilli in their sputum, 8 of such cases had lost the bacilli by the time of their discharge. This is clearly not a large proportion, but it does not, I believe, differ materially from the results obtained in other institutions dealing with similar kinds of cases, and where the cases have been submitted to frequent bacteriological examination.

As is naturally to be expected, the most advanced cases yield the largest proportion of patients with infected spit. Thus, of the 26 cases in the first stage of the disease included in the table herewith submitted, none showed any tubercle bacilli in the sputum during any part of their stay in hospital. Of the 43 cases in the second stage, only 4—or about 1 in 11—had an infected sputum; while of the 125 cases in the third or most advanced stage, as many as 99—or 4 in every 5—

showed bacilli. It is not generally known to the laity that a not inconsiderable proportion of even advanced cases remain uninfectious even up to the time of death, but it is unwise to rely on any case continuing in such a condition without periodic bacteriological tests of the sputum.

A matter of considerable medical and public interest in the treatment of tuberculosis is the effect and value of tuberculin. Tuberculin is practically the only specific treatment for tuberculosis that has enjoyed the support of a considerable part of the medical profession for more than a few years. Other special modes of treatment have arisen from time to time, and been much vaunted, and have acquired a considerable reputation among a certain number of medical practitioners. Some have been of a purely empirical character, without any scientific basis. Others have had some semblance of such basis, but scarcely one has survived an experience of more than three or four years. Tuberculin is, of all specific remedies for tuberculosis, the one most likely, on scientific grounds, to be of value. Its real value is, in the opinion of a large section of the medical profession, still open to doubt. Partly for this reason, and partly because of the difficulties attending its administration, it has never been largely employed outside institutional practice.

When provision was made for the admission of cases to the City Hospital, we determined to make as full a trial as possible of tuberculin in the treatment of practically every suitable case of pulmonary tuberculosis, and followed in the dosage and in the general lines of its administration the practice of Dr. Camac Wilkinson, of London, who, of all the British specialists in this disease, claims to have obtained the most satisfactory results from the use of tuberculin.

The accompanying table shows that during 1914 the proportion of cases treated with tuberculin was small, only 28 out of the 194 cases having been so treated. The proportion was, however, much larger in the preceding year, when 85 cases out of 163 were thus treated. As is well known to medical men, not every case is suited to the administration of tuberculin. It is, of course, hopeless to try it or any other remedy in very advanced cases in which the lung tissue is already extensively involved, and the patient is beyond hope of recovery. But, besides these cases, there is a considerable number of others in less advanced and more hopeful stages of the disease, which practically from the beginning do not tolerate the administration of tuberculin—in which it may produce nausea, and headache, and febrile symptoms, and in which it may aggravate in place of alleviating the normal symptoms of the disease. In such cases, the remedy has to be abandoned after a few trials. These cases are naturally not included in the table as among the cases treated with tuberculin. The Tuberculosis Medical Officer (Dr. Banks) and myself, although believing that some advantage was being obtained in certain cases, had begun to entertain doubts as to the advantage of using it extensively. Practically, during 1913, all apparently suitable cases were treated with tuberculin, but in 1914 the use of tuberculin was considerably limited, in respect of the proportion of cases treated, as has just been indicated. It is, therefore, interesting to make a comparison between the cases treated in 1914 and the cases treated in the preceding year in respect of the benefits of tuberculin treatment. There is, however, great difficulty in making such a comparison satisfactorily. Our cases are not numerous enough to establish any very definite conclusions. Moreover, there is an almost unavoidable inequality in the conditions of the treated and non-treated cases brought under the comparison. The treated cases, as already indicated, are selected cases—that is, cases believed to be, partly from clinical considerations and partly from trial of the remedy, suitable for tuberculin treatment and tolerant of such treatment.

With this important qualification in mind, it may not, however, be uninstructive to look at the results. In order to eliminate, in a broad way, the effect of such a selection as I have just referred to, and in view also of the total number of tuberculous cases treated in the hospital not being large, it may be well to ignore the grouping of the cases according to the stages, the more that the proportion of early stage cases was small and practically the same in both years. I have, however, eliminated from the comparison all cases of children under 13 years of age, not that the inclusion of such cases would lead to different conclusions from those suggested by a consideration of the cases of higher ages, but because several of these young patients suffer from a type of pulmonary tuberculosis in which the glands at the root of the lungs are more definitely involved than the lungs themselves, and give a special character to the tuberculosis in such children as compared with the ordinary pulmonary tuberculosis of adults. Excluding, therefore, cases of children under 13 years of age, there were 118 cases of pulmonary tuberculosis treated in the hospital in 1913, and 143 in 1914. Of the 118 cases in 1913, 12 per cent. were in the first or second stage of the disease; and of the 143 cases in 1914, 14 per cent. There was, therefore, little difference in the percentage of early cases between the two years, but the difference is in favour of the cases in the later year. Subjoined is an analysis in brief tabular form of these cases for each of the two years, showing the percentage of cases with tubercle bacilli in the sputum at the beginning and at the end of hospital treatment, the percentage of tuberculin-treated cases, the percentage of cases gaining in weight, with the average gain, the percentage of cases showing improvement in general health and in the lung condition, and the percentage of cases fit for work on discharge. The average stay in hospital is also given.

Analysis of Cases of Pulmonary Tuberculosis (above 13 years of age) Treated in City Hospital, and Discharged during each of the Years 1913 and 1914.

	1913.		1914
No. of Cases Discharged,	118	...	143
Average stay in Hospital (days),	119	...	132
Percentage of Cases:—			
(1) In Stages I. or II.,	12	...	14
(2) Receiving Tuberculin,	46	...	16
(3) Showing Gain in Weight—			
(*a*) Percentage of Cases,	75	...	80
(*b*) Average Gain (lbs.),	11	...	10

	1913.		1914.
(4) With General Health—			
(*a*) Improved, ...	61	...	69
(*b*) Stationary, ...	14	...	10
(5) With Lung Lesion—			
(*a*) Improved, ...	19	...	27
(*b*) Stationary, ...	57	...	57
(6) With Tubercle Bacilli in Spit—			
(*a*) On admission, ...	73	...	70
(*b*) At discharge, ...	62	...	64
(7) Fit for Work, ...	49	...	48

In all the comparisons the persons that died in hospital are reckoned in the number of discharges.

These figures show that, in 1913, 46 per cent., or slightly under one-half of the cases were treated with tuberculin, while only 16 per cent., or about one-sixth, were so treated in 1914. All cases otherwise had the usual hygienic treatment. As affording some indication of the strict comparability of the groups for the two years, reference has already been made to the proportion of early stage cases being slightly greater in 1914 than in 1913. The somewhat better constitution of the group for the later year is also indicated by a slightly larger proportion of the cases on admission having no tubercle bacilli in the sputum. The percentage of such cases was 30 in 1914, as against 27 in 1913. But, on the whole, the complexion of the cases for the two years was substantially alike, with, however, a slight bias in favour of a better group in the later year.

As to the conditions on discharge, the general health of the 1914 group had improved in 69 per cent. of the cases, as against 61 per cent. for the 1913 group. The weight also had increased in a larger proportion (80 per cent.) in the former than in the latter group (75 per cent.). This represents, of course, a difference in favour of the 1914 group, but as the opinion of the Tuberculosis Medical Officer as to the improvement in general health may have unconsciously been based on a slightly different standard in the two years, I have given the percentage of the cases in which the general health was regarded to be stationary in the belief that the dividing line between stationary cases and cases that had become worse might be more exactly drawn than the line between stationary cases and improved cases. It will be seen that in 1914 the percentage of stationary cases was 10, while in 1913, it was 14 per cent. If the whole of the excess of the proportion of stationary cases in 1913, as compared with 1914, is transferred to the proportion of improved cases in 1913, it still leaves a proportion of improved cases below that noted for 1914.

A better test, however, of the relative improvement in the groups of the two years should be found in the lung condition, which is less a matter of opinion than of exact physical examination. The year 1914, with 27 per cent. of improved cases, shows, in this important respect, distinctly better results than the year 1913, with 19 per cent. In both years, the proportion of cases in which the physical conditions remained stationary was 57.

A further possible test of the effects of tuberculin treatment is provided in the relative proportion of the cases losing the tubercle bacilli from the sputum. This comparison gives distinctly more favourable results for the year 1913. In that year the proportion of cases with bacilli in the sputum fell from 73 per cent. of the cases on admission to 62 per cent. of the cases on discharge—giving a difference of 11. In 1914, the fall was from 70 to 64—showing a difference of 6. This is undoubtedly in favour of tuberculin.

As regards fitness for work, the percentage of those who, on discharge in 1913 were considered fit for work, was 49; in 1914, it was 48, or practically the same.

Only one other point in the comparison may be referred to, namely, that the average stay in hospital of the cases in 1913 was 119 days, while in 1914 it was 132 days, or 13 days longer. This gives a slight advantage to the later year.

Stated briefly, this comparison would appear to indicate that in respect of general health, and especially of the lung condition, the year with a low proportion of tuberculin-treated cases yielded rather better results than the year with a high proportion of such cases; but that, on the other hand, in respect of the removal of the bacilli from the sputum, the year with the more extensive use of tuberculin gave appreciably better results than the year with the more restricted use of tuberculin.

The cases are, however, too few to form a basis for any exact conclusions, but the results, taken broadly, serve to confirm the general belief that, while tuberculin may not be without value in the treatment of certain cases of pulmonary tuberculosis, it is not a remedy from which any very substantial results are to be expected in the treatment of cases of pulmonary tuberculosis in general.

There is one possible criticism of this conclusion, as based on the experience here, that deserves some notice. It may be urged that, as the bulk of the cases in each year were classed in the Third Stage of the disease, a sufficiency of suitable material for any real test was awanting. But the cases admitted to the tuberculosis wards of the hospital represented very fairly in their character and proportions the types and stages of cases as ordinarily notified to the Health Department. I think it is probable that the Tuberculosis Medical Officer, who was responsible for the classification of the cases in 1913 and subsequent years, is unusually strict in admitting cases to the earlier stages. Another physician might have placed a considerably larger proportion in the earlier stages. But the Tuberculosis Officer is inclined to defend his classification.

In the year 1912—the year preceding the two years under comparison—128 cases of pulmonary tuberculosis were discharged from the hospital after treatment. In that year, the cases, although admitted on practically the same basis of selection as in the succeeding years, show, according to the clinical records, a much larger proportion of early cases than in the later years, namely, 39 per cent., as against 12 and 14 for the years 1913 and 1914. But the chief clinical officer in that year was not the same as in the subsequent years, and, although a man of the highest ability and of the greatest care in diagnosis, proceeded, in my belief, on somewhat different standards in classification. I have accordingly not brought the figures for that year into the tabular comparison, but nevertheless they may be noted, provided it is kept in view that there is at least a suggestion that the cases in 1912 were, in respect of a possibly higher proportion of early cases, more favourably constituted for showing better results with tuberculin. In that year, the percentage (37) of cases treated with tuberculin was fairly high. The percentage of cases showing improvement in general health was 72, and in weight, 83—or higher than in either 1913 or 1914. But, on the other hand, the percentage exhibiting an improvement in respect of the lung lesion was only 15, or less than in 1913, and considerably less than in 1914; and the reduction in the percentage of sputum-infected cases was only from 63 on admission to 59 on discharge, or less than in either 1913 or 1914. The average stay in hospital, it may be mentioned, was 122 days, or about the same as in the other two years.

ABBREVIATED

REPORT FOR THE YEAR 1915

BY THE

MEDICAL OFFICER OF HEALTH.

POPULATION.

The population, as estimated at the middle of the year, was 165,650, including the usual allowance for the staff and inmates of the Poorhouse and of Kingseat Asylum.

BIRTHS.

(See also Report for 1914, *pp.* 4-6.)

All Births.—The total number of births registered during the year, including 3 births in the Poorhouse at Oldmill, was 3,784, after correction for transfers from or to other districts. This gives a rate of 23·0 per 1,000 of population, as against 24·6 in the preceding year (Report for 1914, p. 4). Estimated in relation to married women between 15 and 45 years of age, the rate for legitimate children was 197 per 1,000 of such women.

The proportion of males to females born during the year was 100·5 : 100, and is considerably lower than in 1914 (105 : 100). It has been said that during or after great wars the proportion of males increases.

Illegitimate Births.—After correction for transfers, there were 380 illegitimate births during the year, as against 377 in the preceding year—or an increase of only 3. The percentage of illegitimate births to the total births was 10·0, as against 9·4 in the preceding year and a range of 10·4 to 10·6 in the three years 1911-13. The illegitimate births in 1915, in relation to the number of unmarried women and widows between the ages of 15 and 45, were equivalent to a rate of 15·6 per 1,000 of such women. In 1914, it was also 15·6, while in 1913 it was 17·1. Thus estimated, by the most exact method, illegitimacy has decreased since the War began.

INFANT CARE.

(See also Report for 1914, *pp.* 16-21.)

The number of official Health Visitors, for dealing with Infant Care, appointed by the Corporation was increased from three to four in the autumn of 1915.

They received, as usual, invaluable assistance from the Guild of Voluntary Visitors, of whom there were 78, and from the five Mothers' and Babies' Clubs and the Central Day Nursery. The work of the Guild and of Clubs and the Nursery was carried on with unabated zeal by the various Ladies' Committees, under the general presidency of Mrs. G. B. Esslemont, and valuable services in infant consultations were rendered by Dr. Agnes Thomson, Dr. Laura Sandeman, Dr. William Clark, and Dr. Charles Forbes. The number of expectant mothers and of mothers with babies enrolled in the Clubs was 594, as against 577 in the preceding year.

Notification of Births.—The accompanying table gives the births (live and still) as notified under the Notification of Births Acts.

BIRTHS NOTIFIED TO MEDICAL OFFICER OF HEALTH IN 1915 UNDER NOTIFICATION OF BIRTHS ACTS.*

NOTIFIED BY	LIVE-BORN.	STILL-BORN.
Parents,	309	—
Medical Attendant,	2,318	94
Midwife or Nurse,	1,128	63
Parent and Medical Attendant or Midwife,	41	—
Medical Attendant and Midwife,	12	—
TOTALS,	3,808	157

* Total Live-Births registered by Registrars were 3,832, exclusive of 3 in Poorhouse outside City Boundary.

It will be observed that 157 still-births were notified, or 41 per 1,000 registered births. In the previous year, the still-births were 150, or 37 per 1,000 registered births. The number of still-born children buried in the cemeteries and churchyards within Aberdeen during the year was ascertained to be 131, excluding still-born children not born within the City.

Professional Attendance at Birth.—The Health Visitors ascertained, as usual, the nature of the professional attendance at birth in all cases visited by them. During the year, they visited 2,745 newly-born children—almost exclusively children born in houses of three rooms and under—and, of these children, 1,581, or 57·6 per cent., had been attended at birth by a medical practitioner; 960, or 35·0 per cent., by a midwife or nurse; 81, or 2·9 per cent., by a nurse from the Maternity Hospital; while 123, or 4·5 per cent., were born within the Maternity Hospital. These proportions differ very slightly from those of the preceding year (Report for 1914, p. 19).

Size of House and Breast-Feeding.—Of the infants visited by the Health Visitors, excluding infants found to have died previous to visitation, 415 were in one-roomed houses, and, of these, 376 infants, or 91 per cent., were breast-fed in whole or part;

1,466 were in two-roomed houses, with 1,245, or 85 per cent., breast-fed; 618 were in three-roomed houses, with 479, or 78 per cent., breast-fed; and 156 were in four-roomed houses, with 105 infants, or 67 per cent., breast-fed. The proportion of whole or part breast-fed children among the total cases visited was 83 per cent., and shows a slight increase as compared with 82 per cent. for the preceding year. (See Report for 1914, p. 18.)

MARRIAGES.

(See also Report for 1914, *pp.* 5, 7-9.)

The number of marriages during the year was 1,878, equivalent to 11·3 per 1,000 of population. This is by far the largest marriage-rate ever recorded for the City since the commencement of civil registration. In 1914, the rate was 9·3.

Residence.—As regards residence, 1,304 of the males married were ordinarily resident in Aberdeen, the remaining 574 coming from outside the City. These figures in 1915 do not give a quite reliable indication of the residence, as, in the case of soldiers, the only address given is the place where the soldier is for the time stationed. Thus, a soldier, although ordinarily resident in Aberdeen, but stationed at, say, Ripon at the time of his marriage, would be registered as having his place of residence at Ripon.

As regards the females, 1,433 were ordinarily resident in the City, and 445 lived outside the City, the corresponding numbers for the preceding year being 1,255 and 281.

Irregular Marriages.—The number of irregular marriages was exceptionally large, being 685. In the preceding year, such marriages amounted to 294, and were also numerous. In 1911, 1912, and 1913, they were only 105, 100, and 133, respectively.

Status.—The persons married included 138 widowers and 84 widows, as compared with 137 and 85, respectively, in the preceding year.

Occupation.—In respect of occupation, 1,472 were of men belonging to the labouring and artisan classes, as against 1,158 in the preceding year and 981 in 1913. In the commercial classes there were 298 marriages, as against 292 in the preceding year; and in the professional classes, 102, as against 79.

All marriages of men belonging to the Army and Navy are, in the above figures, classified according to their normal occupation. The total number of army men, regardless of such classification, who were married during 1915 was 522, and of naval men, 142. In 1914 the corresponding figures were 100 and 12.

As to the occupations of the women, women employed in workshops and factories, including 123 dressmakers and milliners, provided 751 marriages, as against 650 in the preceding year and 579 in 1913. The next largest group was that of domestic servants, with 487 marriages, as compared with 370 in the preceding year and 334 in 1913. Women without stated occupation formed the next highest group, with 339 marriages, as against 274 in the preceding year and 229 in 1913. Next came saleswomen, including dealers, with 135 marriages, as compared with 107 in the preceding year and 90 in 1913. Teachers and nurses provided 72 marriages, as against 60 in the preceding year and 63 in 1913. Of marriages of clerks and typists there were 80, as against 61 in the preceding year and 41 in 1913.

DEATHS.

(See also Report for 1914, *pp.* 5, 9, *et seq.)*

During 1915, there were 3,075 deaths, after correction for transfers. This is equivalent to a death-rate of 18·6 per 1,000 of population, and is the highest death-rate in any year since 1900. The death-rate in 1914 was 16·7.

The *average age at death* was 36·3 years, as against an average of 37·9 for the preceding ten years.

The *excess of the birth-rate over the death-rate* was 4·4, and is the lowest on record. In the preceding year, it was 7·9. For many years preceding 1911 it ranged from about 11 to 14.

Infant Mortality (see also Report for 1914, *pp.* 10-16).—There were 654 deaths of infants under one year of age, or 173 deaths per 1,000 births. This is an exceptionally high mortality, and compares unfavourably with the rate of 121 per 1,000 births in the preceding year and with the average of 132 for the preceding ten years.

The accompanying two tables give the usual analysis of the causes of death among infants, and show that the excessive mortality during the year was mainly due to a considerable increase in deaths from lung diseases (pneumonia and bronchitis), from measles and whooping cough, from diseases of the digestive system, and from atrophy and debility. The increase was only slight at ages under three months, but was well marked at each subsequent quarter of the first year of life, and was most pronounced in the last quarter, where the deaths were nearly twice as numerous as usual, due mainly to measles, whooping cough, and pneumonia.

Mortality at Pre-School Age-Period (1 *to* 5 *years), excluding Infant Period.*—The number of deaths at this period was 405, as against an average of 268 for the preceding five years. The excess of deaths was mainly due to scarlet fever, measles, and pneumonia.

Mortality at School Age-Period (5 *to* 15 *years). (See also Report for* 1914, *pp.* 22-25.)—The deaths at this period were 156, as against an average of 131 for the preceding five years. Here also there was a considerable increase, due to practically

ABERDEEN.—CAUSES OF DEATH AMONG CHILDREN UNDER FIVE YEARS OF AGE.—*Year* 1915.

(*Corrected for transferred deaths.*)

CAUSES OF DEATH.	AGE.																	Average for Preceding 5 Years. (1910-14.)	
	FIRST YEAR.												SECOND TO FIFTH YEARS.				Total		
	First Four Weeks.				First Three Months.			The Four Quarters.				Total							
	0–1	–2	–3	–4	*0–1	–2	–3	*0–3	–6	–9	–12	*0–1	–2	–3	–4	–5	*1–5	0–1	1–5
Congenital Malformations	4	1	1	...	6	1	1	8	2	2	...	12	...	...	...	...	...	10	0·4
Prematurity	61	4	8	5	78	6	2	86	1	...	...	87	..	...	...	...	...	103	0·2
Atelectasis and Diseases of Early Infancy	19	2	2	...	23	1	...	24	...	...	...	24	...	...	...	...	...	22	0·0
Atrophy, Debility, and Icterus	16	4	6	7	33	16	10	59	16	9	1	85	...	...	...	...		74	0·0
Diseases of Digestive System, incl. Diarrhœa	2	3	1	4	10	12	11	33	30	23	13	99	21	4	1	1	27	75	23
Urinary Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	0·8	2·6
Diseases of Circulation	...	...	1	...	1	...	...	1	...	...	...	1	1	..	...	1	2	0·8	1·6
Pneumonia	...	1	1	2	4	11	4	19	17	17	23	76	29	12	6	4	51	51	42
Bronchitis	...	2	1	1	4	5	4	13	15	14	6	48	4	...	1	...	5	38	8
Convulsions	2	2	4	2	10	5	6	21	11	2	4	38	10	3	...	...	13	35	11
Inflammation of Brain and Membranes	...	...	...	...	...	...	1	1	5	...	2	8	3	2	...	1	6	6	6
Epidemic Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	1	...	...	1	.	1	...	1	2	0·0	0·2
Measles	...	...	...	...	...	3	1	4	3	10	27	44	63	21	8	3	95	22	38
Whooping Cough	...	...	...	...	...	2	1	3	10	11	16	40	15	7	1	3	26	21	20
Scarlet Fever	...	...	...	...	...	1	...	1	...	2	5	8	21	26	20	15	82	1·8	14
Diphtheria	...	..	...	...	...	...	...	...	1	1	5	7	10	5	6	8	29	5	38
Typhoid Fever	..	...	...	...	..	...	...	...	..	...	...	...	...	...	...	...	..	0·0	0·4
Tuberculosis of (*a*) Brain	...	...	...	...	...	...	3	3	2	1	1	7	6	5	1	3	15	6	16
Tuberculosis of (*b*) Abdomen	...	...	...	...	...	...	...	...	1	1	1	3	1	7	1	...	9	4·4	8
Tuberculosis of (*c*) Lungs	...	...	...	...	...	...	1	1	2	1	3	7	4	2	2	...	8	1·0	4·2
Tuberculosis of (*d*) Other forms	...	...	...	...	...	1	...	1	3	1	...	5	1	3	2	...	6	2·2	3·8
Syphilis	1	...	...	...	1	...	...	1	2	2	1	6	...	...	...	...	...	15	1
Burns and Scalds	...	...	...	...	...	...	...	...	...	...	...	...	1	3	1	2	7	0·8	8
Suffocation	...	...	...	...	...	4	4	8	4	...	...	12	...	..	...	...	...	7	1·0
Other Accidents	.	...	...	...	...	1	...	1	...	...	...	1	...	1	...	1	2	0·2	3·8
Other Causes	2	1	1	2	6	3	1	10	9	11	5	35	10	4	5	...	19	29	17
ALL CAUSES	107	20	26	23	176	72	50	298	135	108	113	654	200	106	56	43	405	530	268
Average for preceding 5 years	115	24	26	21	186	52	54	291	101	74	63	530	149	56	34	29	268		

* This column includes all deaths in preceding columns.

ABERDEEN.—INFANT MORTALITY.—*Years* 1905-1915.

(*Corrected for transferred deaths since 1904.*)

YEAR.	No. of Births.	Births per 1,000 of Population.	Deaths of Infants under 1 year.	Deaths of Infants under 1 year per 1,000 Births.	No. of Survivors.	Survivors per 1,000 of Population.	No. of Deaths among Children Dying under 1 Year of Age from Chief Causes.										No. of Deaths from All Causes at Ages		
							Prematurity, Congenital Defects, and Dis of Early Infancy.	Dis. of Digest. System, Wasting and Debility, Convulsions.	Bronchitis and Pneumonia.	Common Zymotic Diseases.				Tuberculosis.	Syphilis.	Suffocation.	Under 2 Weeks.	Above 2 Weeks and under 6 Months	Above 6 Months and under 1 Year.
										Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.						
1915 . .	3784	23·0	654	173	3130	18·9	122	222	124	44	40	7	8	22	6	12	127	306	221
1914 . .	4006	24·6	487	121	3519	21·4	133	188	69	2	8	5	4	14	14	8	132	239	116
1913 . .	3852	23·9	591	153	3261	20·1	137	195	106	47	15	7	3	11	13	7	158	250	183
1912 . .	4145	25·4	530	127	3615	22·0	135	160	102	12	30	4	1	9	18	8	142	275	113
1911 . .	4009	24·5	563	139	3446	20·8	116	177	93	44	45	4	1	21	14	6	132	257	174
1910 . .	4319	26·2	478	111	3841	23·3	132	181	75	3	8	7	0	12	14	5	130	246	102
Average 1910-1914	4066	24·9	530	130	3536	21·5	131	180	89	22	21	5	1·8	13	15	7	139	253	138
1909 . .	4518	27·5	671	149	3847	23·4	162	194	133	7	56	5	0	22	16	7	176	311	184
1908 . .	4472	27·3	577	129	3895	23·8	113	191	98	30	34	2	1	20	10	7	112	305	161
1907 . .	4502	27·6	561	125	3941	24·2	141	175	108	12	45	4	2	18	7	7	135	270	156
1906 . .	4712	29·0	599	127	4113	25·3	137	201	84	29	29	3	1	21	12	8	156	285	158
1905 . .	4892	30·3	678	138	4214	26·1	136	255	132	12	16	3	0	19	18	8	142	360	176
Average 1905-1909	4619	28·3	618	134	4002	24·6	138	203	111	18	36	3	0·8	20	13	7	144	306	167
Average 1905-1914 (ten years)	4343	26·6	574	132	3769	23·1	135	192	100	20	29	4	1·3	17	14	7	142	280	153

ABERDEEN.—MORTALITY AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES.

(Corrected for transferred deaths.)

A.—NUMBER OF DEATHS—YEAR 1915.

AGE.	ALL CAUSES.	Zymotic Diseases.			Tuberculous Diseases.		Respiratory Diseases.			Diseases of Circulatory System	Diseases of Genito-Urinary System.	Nervous Diseases.			Dis. of Digest. Syst. incl. Diarrhoea.	Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Ordinary.	Venereal.	Septic.	Phthisis.	Other Tuberculous	Pneumonia.	Bronchitis.	Other Respiratory.			Cerebral Haemorrhage & Hemiplegia.	Convulsions	Other Nervous.					Under age of 1 year.	Above age of 65 years.	
Under 1 year,	654	104	7	0	7	15	76	48	7	1	0	1	38	14	99	0	118	13	85	0	21
1—5 years,	405	235	0	0	8	30	51	5	1	2	1	0	13	9	27	0	0	9	0	0	14
5—15 ,,	156	70	0	0	15	15	11	2	0	8	7	1	0	11	6	0	0	5	0	0	5
15—25 ,,	130	16	0	0	38	7	8	1	1	13	2	0	0	7	7	2	0	12	0	0	16
25—45 ,,	309	5	2	2	94	3	17	1	2	27	12	6	0	30	17	27	0	33	0	0	31
45—65 ,,	574	14	0	6	51	4	22	21	8	139	41	62	0	20	29	91	0	27	0	0	39
65+ ,,	847	19	0	0	7	0	33	78	15	237	38	113	0	21	28	91	0	11	0	120	36
ALL AGES,	3075	463	9	8	220	74	218	156	34	427	101	183	51	112	213	211	118	110	85	120	161

B.—DEATH-RATE PER 100,000 OF POPULATION AT EACH AGE—YEAR 1915.

AGE.	ALL CAUSES.	Zymotic Diseases.			Tuberculous Diseases.		Respiratory Diseases.			Diseases of Circulatory System	Diseases of Genito-Urinary System.	Nervous Diseases.			Dis. of Digest. Syst. incl. Diarrhoea.	Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Ordinary.	Venereal.	Septic.	Phthisis.	Other Tuberculous	Pneumonia.	Bronchitis.	Other Respiratory.			Cerebral Haemorrhage & Hemiplegia.	Convulsions	Other Nervous.					Under age of 1 year.	Above age of 65 years.	
Under 1 year,	17704	2815	190	0	190	406	2057	1299	190	27	0	27	1028	379	2679	0	3193	352	2300	...	568
1—5 years,	2708	1570	0	0	53	200	341	33	7	14	7	0	86	60	181	0	0	60	...	...	93
5—15 ,,	426	190	0	0	41	41	30	6	0	21	19	3	0	30	16	0	0	14	...	...	14
15—25 ,,	410	50	0	0	120	22	25	3	3	41	6	0	0	22	22	6	0	38	...	...	50
25—45 ,,	697	11	4	4	211	7	38	2	4	61	27	13	0	67	38	61	0	74	...	...	70
45—65 ,,	2263	55	0	24	201	16	87	83	31	548	162	244	0	79	114	359	0	106	...	...	154
65+ ,,	9593	215	0	0	80	0	373	883	170	2684	430	1280	0	238	317	1031	0	125	...	1359	407
ALL AGES,	1859	280	5	5	133	45	132	94	21	258	61	111	31	68	129	128	71	66	...	...	97

C.—DEATH-RATE PER 100,000 OF POPULATION AT EACH AGE—AVERAGE FOR TEN YEARS—1905-1914.

AGE.	ALL CAUSES.	Zymotic Diseases.			Tuberculous Diseases.		Respiratory Diseases.			Diseases of Circulatory System	Diseases of Genito-Urinary System.	Nervous Diseases.			Dis. of Digest. Syst. incl. Diarrhoea.	Malignant Diseases.	Developmental Diseases (ex. old age)	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Ordinary.	Venereal.	Septic.	Phthisis.	Other Tuberculous	Pneumonia.	Bronchitis.	Other Respiratory.			Cerebral Haemorrhage & Hemiplegia.	Convulsions	Other Nervous.					Under age of 1 year.	Above age of 65 years.	
Under 1 year,	14777	1523	350	32	36	395	1358	1176	151	28	25	22	1011	298	2100	7	3233	217	2261	0	544
1—5 years,	1744	640	8	2·8	32	220	287	73	28	10	12	6	74	60	132	4·1	12	82	...	...	63
5—15 ,,	325	81	0	2·6	31	65	17	2·1	3·4	19	6	0·3	4·3	22	26	1·2	1·5	19	...	...	22
15—25 ,,	383	19	1·2	3·6	146	28	23	0·6	5	29	12	3·0	0	22	25	5	0·3	28	...	...	28
25—45 ,,	683	19	1·9	14	177	22	52	12	12	87	35	11	0·4	46	38	40	0·2	48	...	..	69
45—65 ,,	2003	41	4·5	14	150	16	121	102	37	415	131	198	0·8	115	122	325	0	79	...	...	132
65+ ,,	8537	159	6	26	70	16	357	887	134	1866	430	1077	2·4	243	416	869	0	146	0	1386	449
ALL AGES, .	1582	136	10	10	113	58	118	99	23	196	56	90	32	64	123	106	78	55	...	...	90

the same causes as the high mortality at the preceding age-period. Deaths from inflammation of the kidneys were also considerably above the average.

FEEDING.—A Committee of the School Board provided, as usual, meals for certain of the poorer children during the period of school attendance. Altogether, at the different centres, 420 children were thus assisted during the year, as compared with 400 in the preceding year.

HOLIDAY CAMPS.—The Children's Fresh-Air Fortnight, with its Home at Linnmoor and the Aberdeen Camp for Ailing Children at Scotstown Moor, provided a most beneficial holiday for 844 children, as against 889 in the preceding year.

CLEANSING OF VERMINOUS CHILDREN.—Under the joint arrangement between the Town Council and the School Board for the cleansing of verminous children and households, the inmates, together with the clothing and bedding of 117 households, were removed to the Cleansing Station for cleansing and disinfection.

Mortality at Adolescent Age-Period (15 *to* 25 *years).*—There were 130 deaths at this period, as compared with an average of 125 for the preceding five years, the slight increase being due to deaths from cerebro-spinal meningitis.

Mortality at Early-Mature Age-Period (25 *to* 45 *years).*—The number of deaths was 309, as against an average of 289 for the preceding five years. The increase was due to deaths from pulmonary tuberculosis, diseases of the nervous system, malignant diseases, and accidents and violence.

Mortality at Late-Mature Age-Period (45 *to* 65 *years).*—The deaths amounted to 574, as compared with an average of 500 for the preceding five years. The increase was due to pulmonary tuberculosis, diseases of the circulatory system, diseases of the genito-urinary system, apoplexy, malignant diseases, and accidents and violence.

Mortality at Post-Mature Age-Period (65 *years and upwards).*—The deaths at this period numbered 847, and were also above the average (762) for the preceding five years, the increase being caused by deaths from diseases of the circulatory system and apoplexy.

CAUSES OF DEATH.

(See also Report for 1914, *Table VI., p.* 29.)

Cancer and other Malignant Diseases were registered as the cause of 211 deaths, equal to a death-rate of 128 per 100,000 of population. This is the highest recorded death-rate from these diseases since the commencement of civil registration.

Pneumonia was the cause of 218 deaths, with a death-rate of 132 per 100,000 of population. This is also the highest recorded rate, with the exception of the year 1902, when it was 134.

Bronchitis was registered as the cause of 156 deaths, or a death-rate of 94 per 100,000 of population, being a higher rate than in any year since 1909.

Diseases of the Digestive System (including Diarrhœa) were registered as the cause of 213 deaths, equivalent to a death-rate of 129 per 100,000 of population. This rate is under that for each of the preceding two years, but is somewhat above the average rate for the preceding five years.

Diseases of the Circulatory System caused 427 deaths, giving a death-rate of 258 per 100,000 of population, or the highest rate on record, although the increase since the immediately preceding year is slight. There has been an increase of about 50 per cent. within the past ten years.

Cerebral Hæmorrhage and Hemiplegia caused 183 deaths, equal to a rate of 111 per 100,000 of population. This is also one of the highest rates on record for these diseases.

INFECTIOUS DISEASES.

The accompanying tables give the number of notified or discovered cases of the principal infectious diseases, together with the deaths from each disease, during each of the months of the year, as also the case and death rates in each of the wards of the City. The following are the chief points in regard to the infectious diseases:—

Small-pox.—No cases.

VACCINATIONS.—The returns for children born in the City in 1914 show that, by the end of 1915, 79 per cent. of the surviving children had been successfully vaccinated, as compared with 77 per cent. for the children born in the preceding year. (See Report for 1914, p. 40.) The percentage of conscientious objectors was 11·6, as against 14·4 for the children born in 1913. The percentage of surviving children remaining unaccounted for in respect of vaccination was 9·1 for the children born in 1914, as against 8·3 for 1913. The percentage of conscientious objectors for the children born in 1914, in the different registration districts, was 7·6 in the Nigg district, 9·3 in the St. Nicholas district, 9·8 in the Old Aberdeen district, 10·0 in the Woodside district, 12·7 in the Rubislaw district, and 17·1 in the St. Machar district. The last district has obviously the worst record. It roughly embraces the wards of Ferryhill, Ruthrieston, and a part of St. Nicholas and Rubislaw wards.

Scarlet Fever produced 1,873 cases during the year, and was more prevalent than in any year since the commencement of notification in 1881. The deaths, which amounted to 142, were also unusually numerous, the case-mortality being 7·7 per cent., or nearly three times the average for the preceding ten years. Scarlet fever may be said to have been continuously epidemic in Aberdeen since 1908, interrupted only by a small recession in 1910.

ABERDEEN.—MORBIDITY AND MORTALITY OF INFECTIOUS DISEASES

(*Excluding Tuberculosis*)

DURING EACH YEAR FROM 1905 TO 1915.

(*Not corrected for transferred deaths.*)

DISEASE.		1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	ANNUAL AVERAGE.	
													1905 to 1914.	1895 to 1904.
A. Notifiable.														
Small-pox,	No. of Cases, ...	0	6	0	0	0	0	0	0	1	0	0	0·7	1·2
	No. of Deaths, ...	0	1	0	0	0	0	0	0	0	0	0	0·1	0·1
	Percent. of Deaths	0	*16·7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	14·3	8·3
Scarlet Fever, ...	No. of Cases, ...	1873	1552	1110	1102	1257	674	1029	1262	492	151	215	884·4	688
	No. of Deaths, ..	142	83	31	34	25	7	11	17	5	6	11	23 0	24
	Percent. of Deaths	7·7	*5·3*	*2·8*	*3·1*	*2·0*	*1·0*	*1·1*	*1·3*	*1 0*	*4·0*	*5·1*	2·6	3·5
Diphtheria,	No. of Cases, ...	675	1627	2062	791	356	299	291	280	196	244	166	631·2	146
	No. of Deaths, ...	51	132	111	36	24	37	35	21	19	18	10	44·3	21
	Percent. of Deaths	7·5	*8·1*	*5·4*	*4·5*	*6·7*	*12·4*	*12·0*	*7·5*	*9·7*	*7·4*	*6·0*	7·0	14·2
Typhoid Fever (including Para-Typhoid),	No. of Cases, ...	13	15	33	120	37	21	34	16	24	16	23	33·9	94
	No. of Deaths. ...	1	3	9	15	4	2	5	0	7	4	4	5·3	10
	Percent. of Deaths	7·7	*20·0*	*27·3*	*12·5*	*10·8*	*9·5*	*14·7*	*0*	*29·2*	*25·0*	*17·4*	15·6	10·9
Typhus Fever, ...	No. of Cases, ...	0	0	0	0	3	0	0	0	0	0	98	10·1	4·4
	No. of Deaths, ...	0	0	0	0	0	0	0	0	0	0	14	1·4	1·1
	Percent. of Deaths	0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*14·3*	13·9	25·0
Erysipelas,	No. of Cases, ...	198	395	229	133	142	159	150	156	212	204	227	200·7	.
	No. of Deaths, ...	7	14	4	1	3	2	5	7	7	7	8	5·8	...
Puerperal Fever, ...	No. of Cases, ...	11	24	10	12	11	6	13	6	13	8	11	11·4	...
	No. of Deaths, ...	8	15	7	8	4	2	8	6	6	4	6	6·6	...
Cerebro-Spinal Meningitis,	No. of Cases, ...	19	1	0	5	2	4	18	4	4	6	0	4·4	...
	No. of Deaths, ..	14	1	0	5	1	1	10	2	4	3	0	2·7	...
*Acute Polio-myelitis,...	No of Cases, ...	2	2	4	..	...	...	...	...	...	...	...	3·0	...
	No. of Deaths, ...	0	0	0	...	...	...	..	...	...	..	...	0	...
*Ophthalmia Neonatorum	No. of Cases, ...	39	47	41	...	...	...	...	...	...	...	...	44	..
B. Not Notifiable.														
†Measles, ...	No. of Cases, ...	1750	69	1559	395	5232	51	680	1346	453	2093	370	1224·8	2695
	No. of Deaths, ..	147	6	149	39	121	4	33	66	36	72	33	55·9	73
	Percent. of Deaths	8·4	*8·7*	*9·6*	*9·9*	*2·3*	*7·8*	*4·9*	*4·9*	*7·9*	*3·4*	*8·9*	4·6	2·7
†Whooping Cough, ...	No. of Cases, ...	1068	116	678	930	1367	234	1104	713	669	840	232	688·3	1718
	No. of Deaths, ...	70	12	45	61	77	18	113	64	83	66	34	57·3	83
	Percent. of Deaths	6·6	*10·3*	*6·6*	*6·6*	*5·6*	*7·7*	*10·2*	*9·0*	*12·4*	*7·9*	*14·7*	8·3	4·8
Totals, ...	No. of Cases, ...	5648	3854	5726	3488	8407	1448	3319	3783	2064	3562	1342	3699·3	...
	No. of Deaths, ...	440	267	356	199	259	73	220	183	167	180	120	202·4	...
	Percent. of Deaths	7·8	6·9	6·2	5·7	3·1	5·0	6·6	4·8	8·1	5·1	9·0	5·5	...

* Notification commenced May, 1913.

† Compulsory notification ceased February, 1903.

AGE AND WARD DISTRIBUTION OF CERTAIN INFECTIOUS AND OTHER DISEASES IN YEAR 1915.

(Not corrected for transferred deaths.)

DISEASE.		NO. OF CASES AT VARIOUS AGE-PERIODS.					All Ages.	CASES AND DEATHS PER 10,000 OF POPULATION IN EACH WARD OF CITY.*										
		Under 5 years	5-15 years	15-25 years	25-45 years	45+ years		Woodside.	St. Machar.	St. Andrew's.	St. Clement's.	Greyfriars.	St. Nicholas.	Rosemount.	Rubislaw.	Ruthrieston.	Ferryhill.	Torry.
Population (in thousands), Census 1911		...	...	...	...	...	...	9·4	14·3	18·4	11·4	13·9	15·3	17·5	20·2	16·9	15·2	11·4
A. Notifiable.																		
Small-pox	Cases	...	...	...	...	...	...	...	...	...	...	..	...	...	..	...	...	...
	Deaths	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...
Scarlet Fever	Cases	513	1073	195	86	6	1873	114	116	189	98	128	98	115	85	75	87	161
	Deaths	90	48	2	2	...	142	11	9	14	15	9	10	7	3	2	9	11
Diphtheria......	Cases	198	258	138	69	12	675	50	61	51	38	24	35	35	33	26	49	62
	Deaths	37	10	2	1	1	51	5	6	2	4	0·7	3	3	3	1	2	6
†Typhoid Fever	Cases	1	2	7	3	...	13	1	...	2	...	...	2	1	0·5	1	0·7	...
	Deaths	...	...	1	...	...	1	...	...	0·5	...	...	...	...	...	...	...	...
Typhus Fever	Cases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Deaths	...	...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...
Erysipelas	Cases	9	16	26	58	89	198	11	8	11	9	14	21	18	6	8	16	11
	Deaths	...	1	...	...	6	7	...	...	...	...	2	1	0·6	...	...	0·7	...
Puerperal Fever	Cases	...	...	2	8	1	11	...	0·7	2	...	3	1	...	0·5	...	...	...
	Deaths	...	...	...	7	1	8	...	0·7	0·5	0·9	1	1	...	0·5	..	...	...
Epidemic Cerebro Spinal Meningitis	Cases	5	6	6	2	...	19	3	0·7	3	0·9	...	...	0·6	1	1	0·7	3
	Deaths	3	4	6	1	...	14	1	0·7	2	0·9	...	...	0·6	0·5	1	0·7	2
Acute Polio-myelitis	Cases	2	...	...	...	..	2	...	...	0·5	...	...	...	...	...	..	...	0·9
	Deaths	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum	Cases	39	...	...	...	...	39	1	3	4	4	8	3	2	0·5	0·6	0·7	0·9
Tuberculous Disease—																		
(*a*) Pulmonary	Cases	61	227	153	290	108	839	27	43	73	51	97	78	43	31	43	38	35
	Deaths	14	15	38	100	61	228	16	15	16	11	22	19	17	9	9	12	8
(*b*) Other	Cases	117	126	48	18	10	319	30	21	23	23	27	22	21	9	12	17	18
	Deaths	47	18	6	6	5	82	13	3	5	5	7	8	3	1	4	5	4
B. Not Notifiable.																		
‡Measles	Cases	762	925	53	10	...	1750	65	165	151	132	155	118	126	35	99	103	15
	Deaths	139	7	1	...	..	147	4	6	17	16	17	12	7	3	5	6	6
‡Whooping Cough	Cases	470	597	...	1	...	1068	134	95	93	73	95	74	55	19	63	39	4
	Deaths	66	4	...	...	...	70	2	4	5	8	6	5	2	5	3	4	3
Total	Cases	2177	3230	628	545	226	6806	435	513	602	428	551	450	415	221	328	351	311
	Deaths	396	107	56	117	74	750	52	45	64	61	65	59	40	27	25	39	39
Influenza	*Deaths*	4	...	2	3	23	32	...	2	3	...	2	4	...	1	4	2	2
Pneumonia	*Deaths*	125	11	9	18	62	225	6	7	13	14	35	20	19	8	7	11	11
Bronchitis	*Deaths*	53	2	1	1	97	154	6	11	12	10	12	8	6	11	8	7	10

* Deaths occurring in Hospitals are assigned to the Ward of the City from which the cases were originally removed.

† Including 1 case of Para-typhoid (B). ‡ Notification of cases obtained chiefly from School Attendance Officers.

ABERDEEN.—MONTHLY PROGRESS OF CERTAIN INFECTIOUS AND OTHER DISEASES IN YEAR 1915.

(Not corrected for transferred deaths.)

DISEASE.		1915.												Whole Year.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
A. Notifiable.														
Small-pox	Cases	.	...	...	...	...	...	...	...	...	...	...	...	...
	Deaths	...	...	...	...	..	..	...	...	...	...	...	...	...
Scarlet Fever	Cases	128	106	65	59	118	155	186	244	289	248	145	130	1873
	Deaths	10	8	10	4	8	7	14	17	18	23	7	16	142
Diphtheria	Cases	86	66	66	71	32	39	47	52	52	62	51	51	675
	Deaths	11	2	5	3	...	...	5	5	4	3	8	5	51
†Typhoid Fever	Cases	2	2	...	2	...	...	...	3	1	1	1	1	13
	Deaths	..	...	...	...	..	...	...	1	..	...	.	...	1
Typhus Fever	Cases	...	...	...	...	...	...	...	..	..	...	...	...	...
	Deaths	...	...	...	...	...	..	...	...	...	...	...	...	...
Erysipelas	Cases	27	22	20	10	16	14	12	12	18	20	11	16	198
	Deaths	1	...	1	1	...	...	...	1	...	...	2	1	7
Puerperal Fever	Cases	1	1	1	1	1	.	2	1	1	...	...	2	11
	Deaths	...	2	...	...	...	..	1	2	1	...	...	2	8
Epidemic Cerebro-Spinal Meningitis	Cases	...	1	3	3	5	3	2	...	...	1	...	1	19
	Deaths	...	...	3	2	3	2	2	...	1	...	...	1	14
Acute Poliomyelitis	Cases	...	..	...	...	1	...	1	...	...	...	...	...	2
	Deaths	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthal. Neonatorum	Cases	1	2	1	5	1	6	3	4	3	5	4	4	39
Tuberculous Disease—														
(*a*) Pulmonary	Cases	69	124	163	67	60	69	50	40	49	50	54	44	839
	Deaths	15	23	23	19	27	21	24	10	17	20	13	16	228
(*b*) Other	Cases	24	36	43	37	27	25	21	28	13	9	35	21	319
	Deaths	7	3	9	9	12	7	9	8	2	3	6	7	82
B. Not Notifiable.														
‡Measles	Cases	19	29	121	300	586	520	91	48	14	11	4	7	1750
	Deaths	1	1	4	16	32	58	21	10	2		...	2	147
‡Whooping Cough	Cases	58	67	156	219	183	136	30	51	56	48	35	29	1057
	Deaths	8	2	5	7	11	10	13	5	2	2	3	2	70
Total	Cases	415	456	639	774	1030	967	445	483	496	455	340	306	6806
	Deaths	53	41	60	61	93	105	89	59	47	51	39	52	750
Influenza	*Deaths*	6	10	3	4	2	2	1	0	0	1	2	1	32
Pneumonia	*Deaths*	30	31	29	18	15	27	9	4	13	9	18	22	225
Bronchitis	*Deaths*	21	33	21	6	10	6	9	2	7	8	13	18	154

† Including 1 case of Para-typhoid (B.)

‡ Notification of cases obtained chiefly from School Attendance Officers.

Diphtheria.—There were 675 notifications, as against 1,627 in the preceding year, and 2,062 in 1913. The heavy epidemic of diphtheria from which the City has been suffering for some time showed, therefore, definite signs of waning during the past year. There were 51 deaths, the case-mortality (7·5 per cent.) being only slightly above the average for the preceding ten years.

In regard to a suggestion that the rapidly growing and extensive use of gas cooking or heating apparatus in houses, especially where no provision was made for carrying the fumes of the burned gas into a chimney, might have some possible association with the excessive prevalence of diphtheria in Aberdeen in the last three years, I instructed the infectious disease inspectors to obtain, during a period of several months, for every diphtheria case a note as to the use of gas cookers in the household, and as to their connection with chimneys. For purposes of comparison, I obtained also a similar note regarding every case of scarlet fever during a part of the same period. The results are interesting. They disclose a very extensive use of gas cookers in households in Aberdeen, and also show that in about half of the households using gas cookers, the gas cooker is not connected with a chimney. Thus, out of 1,333 consecutive households in which cases of diphtheria occurred, there were 1,041, or 78 per cent., with some kind of gas cooking apparatus. In 368 consecutive households in which scarlet fever cases occurred, 286, or 78 per cent.—being exactly the same percentage as for the diphtheria households—were using gas cooking apparatus. Taking both kinds of diseases together, it was found that such apparatus existed in 53 per cent. of the one-roomed houses; in 74 per cent. of the two-roomed houses; in 80 per cent. of the three-roomed houses; and in 85 per cent. of houses of four rooms and upwards. The fact that the proportion of households with gas cookers was exactly the same for diphtheria and scarlet fever would seem to point to the conclusion that gas cookers had no predisposing effect for diphtheria, unless it is to be assumed that the effect existed, but was equally strong, for both diseases. This, I think, is unlikely. The suggested predisposing effect was merely the possible effect of the combustion products of gas and also of the undue heating of the atmosphere in rendering the throat more susceptible to diphtheria infection.

Against the suggestion there is also the important fact that the use of gas cookers is probably as extensive in many other large towns as in Aberdeen, and yet in several of these towns during recent years there has been no unusual increase of diphtheria such as Aberdeen has experienced.

Typhoid Fever.—There were only 13 cases, including one in which the bacilli of both typhoid and paratyphoid (B) were found. Four of the cases were of soldiers, and, of these cases, three had almost certainly been infected before they came to Aberdeen. There was only one death.

Paratyphoid Fever.—One case of paratyphoid (B), in a married woman of 32 years of age, exclusive of case above referred to in which typhoid co-existed.

Typhus Fever.—No cases.

Measles (not compulsorily notifiable).—Of this disease, 1,750 cases were notified voluntarily during the year, the information being, as usual, mainly obtained under the arrangement with the school attendance officers. There were 147 deaths, being the highest number of deaths from measles in any of the past ten years, except 1913, when there were 149. As usual, the deaths were almost wholly confined to children of tender years. Thus, among 762 cases of children under five years of age there were 139 deaths, while among 925 children above five years of age there were only 7 deaths. The deaths among the younger children were mainly of children under three years of age. This is the constant experience of epidemics of measles.

Whooping Cough (not compulsorily notifiable).—This disease assumed epidemic proportions during the year, 1,068 cases having come to the knowledge of the Department, as against 116 in the preceding year. There were 70 deaths. As with measles, the deaths were most numerous among very young children, chiefly children under two years of age, among whom there were 55 deaths. There were only 4 deaths among children of the school age-period (5 to 15 years).

Erysipelas declined considerably, 198 cases having been notified, as against 395 in the preceding year. There were 7 deaths, as against 14.

Puerperal Fever showed a corresponding decline to that of erysipelas, the number of notified cases being 11, as against 24 in the preceding year, and the deaths 8, as against 15.

Epidemic Cerebro-Spinal Meningitis showed a large increase, 19 cases having been notified, as against 1 in the preceding year. There were 14 deaths. This is the largest number of cases reported since the disease became compulsorily notifiable in 1908. The cases included 6 of soldiers (one being an officer), all of which, except one, ended fatally. Neither among the civilian nor among the military cases was any connection traced between the cases. All known contacts with each case were examined for the meningococcus, but the results were negative, except in two instances. These two positive contacts, both associated with military cases, had never shown any signs of illness, and gave a negative result on subsequent examination. Three of the military cases occurred in May, and the remaining 3 occurred severally in March, October, and November. Of the 3 in May, one was among the troops stationed at Balnagask, the second was in the King Street hutments, and the third was in the King Street barracks—the case in the hutments being in the officers' quarters. All the military cases, except one, were of persons who came from places in Scotland and England at a considerable distance from Aberdeen, and had been in Aberdeen for only a few days or a few weeks before taking ill. There have been no more Army cases since November, 1915.

Acute Poliomyelitis.—There were 2 cases, or the same number as in the preceding year. In one case, the patient was aged nine months, and, in the other, three years.

Ophthalmia Neonatorum.—There were 39 notified cases, being 8 fewer than in the preceding year. All the cases recovered without any apparent interference with sight.

Influenza (not compulsorily notifiable).—There were 32 deaths, as against 37 in the preceding year. Influenza has been registered as the cause of a larger number of deaths in each of the past two years than in any year since 1908.

Venereal Diseases (not notifiable).—The number of deaths registered as due to these diseases was 9, all of which, except 2, were of infants under one year of age. In the preceding year, the number of such deaths was 21, but in that year the number was about twice the average.

TUBERCULOSIS.

Notifications and Deaths.—The accompanying table shows that 839 (367 male and 472 female) cases of pulmonary tuberculosis were notified during the year. In the preceding year, 546 cases were notified. There was thus a large increase, which was noticeable at practically every age-period.

The notifications of other forms of tuberculosis amounted to 319 (141 male and 178 female) cases. The increase, as compared with the preceding year, was very slight, being only 12.

After correction for transfers, there were 220 deaths from pulmonary tuberculosis, equivalent to a death-rate of 133 per 100,000 of population, the death-rate among males being 133 and among females 132. In the preceding year, the death-rate in both sexes taken together was 104. The death-rate in 1915 is the highest since the year 1903.

The deaths from other forms of tuberculosis amounted to 74, equivalent to a death-rate of 45 per 100,000 of population, the death-rate among males being 50 and among females 40. The death-rate in both sexes taken together was 51 in 1914.

The death-rate from all forms of tuberculosis was 178, as against 155 in the preceding year.

The proportion of notified cases of pulmonary tuberculosis to deaths during 1915, after correction for transfers, was 3·8 : 1. This is the highest proportion since notification began. In 1914, it was 3·2 : 1; in 1913, 2·7 : 1; and in 1912, 3·2 : 1.

The corresponding figures for other forms of tuberculosis were, for 1915, 4·3 : 1; for 1914, 3·7 : 1; for 1913, 3·3 : 1; and for 1912, 2·4 : 1.

The proportion of notifications to deaths, for all forms of tuberculosis, is relatively high in Aberdeen as compared with most other towns in the kingdom.

The number of notifications and deaths at each age-period is given in the accompanying table. As usual, the cases were most numerous at the earlier ages.

As regards the site of the disease in the 319 cases of the forms of tuberculosis other than pulmonary, 43 cases (19 males and 24 females) were suffering from abdominal tuberculosis, 28 (11 males and 17 females) from tuberculous meningitis, 48 (22 males and 26 females) from tubercle of bones and joints, including the spine,

ABERDEEN.—TUBERCULOSIS CASES NOTIFIED IN 1915.

(Corrected for Transfers.)

AGE-PERIOD (Years).	Pulmonary Tuberc.			Other Tuberc.			Total Cases.		Total Deaths.		Percentage of Deaths to Cases at each Age-Period.
	Males.	Females	Both Sexes.	Males	Females	Both Sexes.	At each Age-Period.	Per Year of Age-Period.	At each Age-Period.	Per Year of Age-Period.	
Under 5 (*5 Years*), .	36	25	61	59	58	117	178	36	60	12	34
5—15 (*10 Years*), .	93	134	227	55	71	126	353	35	30	3	8
15—25 (*10 Years*), .	65	88	153	16	32	48	201	20	45	5	22
25—45 (*20 Years*), .	116	174	290	8	10	18	308	15	97	5	31
45—65 (*20 Years*), .	50	45	95	3	6	9	103	5	55	3	53
65 and above, . .	7	6	13	...	1	1	14	...	7	...	50
ALL AGES, .	367	472	839	141	178	319	1158	...	294	...	...
Cases per 100,000 of Sex Population	498	543	521	191	204	198	719	...	...	...	..
Deaths per 100,000 of Sex Population	137	136	137	52	41	46	183	...	...	...	...
Percentage of Deaths to Cases notified .	28	25	26	27	20	23	25	..	..	...	...

176 (79 males and 97 females) from tuberculous glands, mainly cervical, and 24 cases (10 males and 14 females) from generalised and other tuberculosis. As compared with the preceding year, there was an increase of glandular cases as also of abdominal cases, but a decrease of brain cases and bone and joint cases. There were 18 deaths of abdominal cases, 28 of meningitic cases, 9 of cases of bones and joints, and 19 of other cases.

Occupations.—As regards the principal occupations of the cases of pulmonary tuberculosis notified during the year, there were among male cases 31 of labourers, 22 of stonecutters and masons, 15 of clerks, 5 of engineers, 4 of compositors, printers, and lithographers, 4 of tailors, and 2 of joiners. Among female cases, there were 38 of millworkers, 12 of domestic servants, 12 of dressmakers and milliners, 10 of fishworkers, 5 of clerks and typists, 3 of shop assistants, and 2 of laundry workers.

Insured Persons (National Insurance Act).—Of the 839 cases of pulmonary tuberculosis notified during the year, 297 were insured persons, 190 being male and 107 being female. In the preceding year, there were 123 males and 66 females.

The notified cases of other forms of tuberculosis included 46 insured persons, 22 of whom were males and 24 females. In the preceding year, there were 23 males and 25 females.

Supervision of Cases.—The Tuberculosis Medical Officer had the assistance of two tuberculosis health visitors or nurses in the visitation and supervision of tuberculosis cases.

The number of first stage cases of pulmonary tuberculosis as notified by the medical attendant was 181, of second stage cases, 244, and of third stage cases, 143. In 248 cases the stage was not stated, and in 23 cases the patient was dead before notification was made. As usual, a large proportion of the cases notified by the medical practitioners as being in the early stages of the disease were found on examination by the Tuberculosis Medical Officer to be in later stages.

Size of House and Density of Occupancy.—The accompanying table gives the number of cases occurring in houses of different sizes, along with the average number of inmates. In the case of pulmonary tuberculosis, the average number of inmates, including the patient, varied from 2·8 in one-roomed houses to 6·4 in three-roomed

TUBERCULOSIS.—SIZE OF HOUSE IN RELATION TO NOTIFIED CASES AND REGISTERED DEATHS DURING 1915.

		1 Room.	2 Rooms.	3 Rooms.	4 Rooms.	5 Rooms and up.	Institutional or Not Stated.	Total Cases.
Pulmonary Tuberculosis (Cases)	Male,	20	135	129	41	25	17	367
	Female,	42	189	166	33	29	13	472
Both Sexes,	Cases,	62	324	295	74	54	30	839
	Deaths,	13	79	62	20	29	17	220
Average Number of Inmates, including Patient,		2·8	4·7	6·4	5·5	5·6	...	5·1
Other Tuberculosis (Cases)	Male,	12	70	37	6	10	6	141
	Female,	9	76	57	20	10	6	178
Both Sexes,	Cases,	21	146	94	26	20	12	319
	Deaths,	5	33	20	4	7	5	74
Average Number of Inmates, including Patient,		3·5	5·0	7·0	7·3	6·8	...	5·6
All Houses in City at Census, 1911. Average Number of Inmates,		2·2	4·0	5·0	5·0	5·0	...	4·4

houses, and 5·6 in houses of five rooms and upwards. The average for houses of all sizes taken together was 5·1, as compared with 5·2 in 1914.

In the cases of other forms of tuberculosis, the average ran from 3·5 for one-roomed houses to 7·0 for three-roomed houses, and 6·8 for houses of five rooms and upwards. The average for all houses was 5·6, as against 5·8 for the preceding year.

There was an increase of pulmonary cases in every class of house as compared with the preceding year, but especially in the smaller houses. Thus, in one-roomed houses there were 62 cases, as against 21 in the preceding year; in two-roomed houses, 324, as against 192; and in three-roomed houses, 295, as against 205. The increase is probably in considerable measure due to the inclusion of a larger proportion than usual of comparatively early cases.

The next table shows the position of the tuberculous cases in relation to room and bed accommodation at the time of notification. Of the 839 cases of pulmonary tuberculosis, only 247, or 33 per cent., were occupying a separate bed in a separate room, and 94, or 11 per cent., had a separate bed but not a separate room. More than one-half had neither a separate room nor a separate bed. In the preceding year, the percentage of the pulmonary cases having the advantage of a separate bed and separate room at the time of notification was 31, and the percentage with a separate bed but not a separate room was 13. In 1913, the corresponding percentages were 33 and 21.

Loan of Beds.—In order to facilitate the separation of the patient from the other members of the household, 245 beds or cots, with the necessary bedding, were given on loan to needful patients who did not desire admission to hospital or who had been discharged from hospital after treatment. In 34 other cases, where bedsteads

Tuberculosis Cases.—Room and Bed Accommodation at Notification.

		Separate Bed		No Separate Room or Bed.	Not Stated.	Totals.
		and Separate Room.	but not Separate Room.			
Pulmonary Tuberculosis,	Male, .	128	40	182	17	367
	Female, .	119	54	281	18	472
	Both Sexes,	247	94	463	35	839
Other Tuberculosis, .	Male, .	18	41	75	7	141
	Female, .	17	45	110	6	178
	Both Sexes,	35	86	185	13	319

were available but the bedding was insufficient, bedding alone was lent. On the last day of 1915 there were on loan 312 beds with bedding, as against 191 at the end of the preceding year and 79 at the end of 1913. In addition, at the end of 1915 there were 51 sets of bedding on loan, as against 22 at the end of the preceding year. The loaned beds and bedding continue to be well cared for, and are nearly always returned in good and clean condition, subject to the unavoidable effects of ordinary use.

Institutional Treatment.—The accompanying table contains information as to the cases that were admitted to indoor institutional treatment during the year, or that were in clinical institutions when notified. The corresponding numbers for the preceding year are given for comparison. The table shows that 349 cases of all forms of tuberculosis had been admitted during the year to indoor institutional treatment, after allowing for 52 cases that had received treatment in two institutions. The net number of cases of pulmonary tuberculosis admitted was 258, and of other tuberculous cases, 91.

Of the 258 pulmonary cases treated, 39 were under ten years of age, 66 between ten and twenty years, 110 between twenty and forty years, and 43 above forty. Of the other tuberculosis cases, the numbers for the corresponding age-periods were, respectively, 47, 30, 6, and 8.

On the 26th of May, the whole of the cases in the tuberculosis wards of the hospital of the Parish Couuncil at Oldmill were removed to the City Hospital on account of the premises at Oldmill having been taken over by the Military Authorities for the accommodation of wounded and sick soldiers. The number of patients transferred was 46, of whom 25 were males and 21 were females. All were suffering from pulmonary tuberculosis except 8.

The average stay of the tuberculosis cases discharged during 1915 from the hospitals and sanatoria giving indoor institutional treatment was, in respect of pulmonary cases, 97 days for the City Hospital, 22 for the Royal Infirmary, 101 for the Sick Children's Hospital, 180 for Newhills Sanatorium, and 113 for the tuberculous wards of the Poorhouse. The corresponding numbers for the preceding year were, in the same order, 119, 30, 27, 142, and 72.

As regards the cases of other forms of tuberculosis, the average stay was 195 days for the City Hospital, 31 for the Royal Infirmary, 72 for the Sick Children's Hospital, 37 for Newhills Sanatorium, and 166 for the tuberculous wards of the Poorhouse—the corresponding figures for the preceding year being 61, 28, 92, 50, and 35.

As to outdoor institutional treatment, 713 cases, all of which were pulmonary except 6, received treatment in the Tuberculosis Institute at the City Hospital. At the Royal Infirmary, 28 cases were treated—3 pulmonary and 25 of other tubercle; at the Sick Children's Hospital, 64 cases—2 pulmonary and 62 of other tubercle; and at the Aberdeen Dispensary, 40 cases—30 pulmonary and 10 of other tubercle. The Parish Council dealt with 21 cases—18 pulmonary and 3 of other tubercle. The total cases receiving outdoor institutional treatment amounted, therefore, to

866, 760 of which were pulmonary and 106 other tubercle. In the preceding year, the total cases treated were 441, while in 1913 they were 236. The increase is almost entirely due to the development of the work of the Tuberculosis Institute.

TUBERCULOUS CASES NOTIFIED AND RECEIVING INDOOR INSTITUTIONAL TREATMENT.

	1915.			1914.		
	Pulm. Tuberc.	Other Tuberc.	Total.	Pulm. Tuberc.	Other Tuberc.	Total.
City Hospital (Sanator. Wards and Shelters),	170	8	178	150	12	162
Newhills Sanatorium,	23	4	27	31	8	39
Tuberc Wards, Oldmill (Parish Council),	29	2	31	62	11	73
Royal Infirmary,	12	27	39	16	28	44
Cults Convalescent Home,	1	3	4	1	2	3
Royal Hospital for Sick Children,	6	54	60	8	59	67
Eidda Home (for Children),	0	2	2	0	3	3
Linnmoor Home (for Children),	8	1	9	13	3	16
Scotstown Moor Camp (for Children),	10	2	12	1	0	1
Morningfield Hospital,	—	—	—	0	1	1
Nursing Home (Aberdeen),	—	—	—	0	1	1
Kingseat Asylum (Parish Council),	4	1	5	6	2	8
Royal Asylum,	1	0	1	4	0	4
Nordrach-on-Dee Sanatorium,	2	0	2	—	—	—
Kingussie Sanatorium,	1	0	1	1	0	1
Bridge of Weir Sanatorium,	1	0	1	1	0	1
Milnathort Sanatorium,	—	—	—	1	0	1
King Edward VII. Sanatorium,	1	0	1	1	0	1
Pinewood Sanatorium,	1	0	1	—	—	—
Downs Sanatorium,	1	0	1	—	—	—
East Anglian Sanatorium,	—	—	—	1	0	1
Brechin Infirmary,	—	—	—	0	1	1
Thomas Walker Hospital, Fraserburgh,	—	—	—	1	0	1
Lerwick Hospital,	—	—	—	0	1	1
Buchan Poorhouse,	—	—	—	0	1	1
Baldovan Institution,	0	2	2	—	—	—
Ruchill Hospital, Glasgow,	2	0	2	—	—	—
Preston Infirmary,	—	—	—	0	1	1
Thorne Hospital, Belfast,	0	1	1	—	—	—
St. Pancras Hospital,	1	0	1	—	—	—
Garsyth Hospital, Manchester,	0	1	1	—	—	—
Larbert Asylum,	1	0	1	—	—	—
Edinburgh Asylum,	1	0	1	—	—	—
Naval and Military Hospitals,	17	0	17	—	—	—
Total Admissions,	293	108	401	298	134	432
Deduct cases treated in two institutions,	35	17	52	36	12	48
Net Number of Cases treated,	258	91	349	262	122	384

BACTERIOLOGICAL EXAMINATIONS.

In addition to a large number of examinations made in the laboratory at the City Hospital, 2,942 examinations were made in the bacteriological department of the University by the Professor of Pathology and his special assistant, under the agreement with the Town Council and other Local Authorities in the north-east of Scotland. The assistants for the year were Dr. Middleton Brown and Dr. Andrew Laing, who were succeeded towards the end of the year by Dr. Elizabeth Gray, Dr. Brown having left to join the Royal Army Medical Corps.

The examinations at the University included 2,558 for diphtheria, only 198 of which proved positive. The large number of negative examinations was due to the extensive swabbings of contacts that were taken and submitted. The percentage of such swabbings of the throat and nose found to be positive was, for persons under five years, 6·6; for persons between five and fifteen, 4·6; and for persons of fifteen and upwards, 10·2. The number of examinations of sputum for tuberculosis was 347, of which 72 were positive, but many additional examinations were made at the Tuberculosis Institute. There were 26 examinations for typhoid fever, only 2 being positive.

COMPARISON WITH OTHER TOWNS.

The accompanying table gives the usual comparison between Aberdeen and other large towns in Scotland in regard to certain of the principal items in the vital statistics. The rates for births and deaths have been corrected for transfers.

All the rates are stated as per 10,000 of population, except where otherwise noted.

Marriages.—All the towns, except Paisley and Greenock, show a considerable increase as compared with the preceding year, the increase being greatest in Edinburgh and Aberdeen, the former City having the highest marriage-rate for 1915 and Aberdeen the second highest.

Births.—Edinburgh had by much the lowest birth-rate (179), Dundee coming next (218), and Aberdeen standing third (230).

Excess of Birth-Rate over Death-Rate.—The extreme limits of the excess were represented, at one end, by Dundee and Edinburgh, with only 7 and 13 respectively, and, at the other end, by Greenock, with 93. Aberdeen occupied an intermediate position, with 43.

Illegitimate Births.—As in the preceding year, Aberdeen had the highest proportion of illegitimate births. Aberdeen and Edinburgh were the only towns among those compared that show an increase since the preceding year. Stated in proportion to the unmarried women and widows between the ages of 15 and 45, Aberdeen stood much higher than any other town, with 15·6 per 1,000 of such women, the next highest being Greenock, with 11·0, and the lowest being Paisley, with 7·9.

BIRTH, DEATH, AND MARRIAGE RATES DURING THE YEAR 1915.

Seven Principal Towns* in Scotland.

(Corrected for transfers of births and deaths.)

	Glasgow.	Edinburgh.	Dundee.	Aberdeen.	Paisley.	Leith.	Greenock.
ESTIMATED POPULATION *(in thousands)*.	1073	327	179	164	85	81	78
MARRIAGE-RATE *(per 10,000 of population)*.	103	120	95	113	73	76	78
BIRTH-RATE—							
A—Total Births *(per 10,000 of population)*.	260	179	218	230	246	247	295
B—Legitimate Births *(per 1,000 Married Women aged 15–45 years)*.	219	163	185	197	223	200	255
C—Illegitimate Births—							
(*a*) *Per 100 total Births*	5·9	8·4	7·4	10·0	5·1	4·9	4·7
(*b*) *Per 1,000 Unmarried Women and Widows aged 15–45 years*...	10·7	8·4	10·0	15·6	7·9	9·6	11·0
DEATH-RATE—							
A—All Ages *(per 10,000 of population)*.							
(*a*) All Causes,	188	166	211	187	171	165	202
Corrected for Age and Sex Distribution	206	172	218	190	189	172	205
(*b*) Principal Epidemic Diseases,	27	16	38	31	22	13	25
(*c*) Tuberculosis,	...	...	...	...	...	...	...
(1) Pulmonary,	13·7	11·4	15·4	13·1	13·1	13·9	11·6
(2) Other,	5·6	4·9	6·4	4·8	5·3	8·7	9·1
(*d*) Bronchitis,	18·2	11·8	18·4	12·8	19·5	12·4	13·8
(*e*) Pneumonia,	20·9	14·8	20·5	15·2	13·5	14·9	21·5
(*f*) Malignant Diseases,	9·9	12·1	11·6	12·7	9·5	10·1	13·3
(*g*) Organic Heart Disease,	12·5	18·8	18·3	18·2	14·8	17·7	19·9
(*h*) Nephritis and Bright's Disease,	6·5	5·0	4·1	4·4	3·9	6·0	3·5
(*i*) Diarrhœa and Enteritis (under 2 years),	4·3	2·1	8·8	5·1	3·4	3·0	7·3
(*j*) Violence (excl. Suicide),	6·3	4·9	5·3	6·6	4·4	5·8	8·9
B—Infants under One Year *(per 1,000 births)*.	143	132	210	173	106	127	145
EXCESS of BIRTH-RATE over DEATH-RATE	72	13	7	43	75	82	93

Deaths.—Each of the towns showed a considerable increase in the death-rate from *All Causes* as compared with the preceding year, the increase being most marked in Dundee, and being proportionately greater not only in that town but also in Glasgow and in Greenock than in Aberdeen. The increase was lowest in Edinburgh.

After correction for age and sex distribution, the death-rate for Aberdeen was fourth lowest (190), the rates for Edinburgh (172), Leith (172), and Paisley (189) being lower.

All the towns, except Edinburgh, showed an increase in the death-rate from *Pulmonary Tuberculosis*, Edinburgh having the lowest rate, and Aberdeen, along with Paisley, the third lowest.

The death-rates from *Bronchitis* and *Pneumonia* were in every instance considerably higher than in the preceding year.

The *Infant Mortality* was highest in Dundee, and Aberdeen stood next. The high mortality in these two towns was associated with epidemics of measles and whooping cough.

TUBERCLE IN MILK.

During the year, 30 samples of milks were examined for tubercle by inoculation methods, 8 having been taken from dairy herds within the City, 12 from milkshops receiving the whole of their supply from farms outside the City, and 10 from country carts. Five of the samples were found to contain tubercle bacilli, one of these being from a herd within the City and one from a country cart. The remaining three samples were from dairies within the City, and were the result of special experiments with the centrifuged slime or deposit from mixed samples of a large number of milks supplied to certain large dairies receiving the whole of their milk supplies from country farms.

OFFENSIVE TRADES.

Four applications were received under Section 32 of the Public Health Act. One was for the transference from George Street to Fraser Place of the business of blowing and drying weasands, and was granted by the Town Council. Another was for the transference of tallow melting from an old to a new part of certain premises in Frederick Street, and was also granted. A third was for the establishment of the business of the manufacture of fish oil in Palmerston Road. Sanction was given, but the business has not yet been started. The last application was for the erection of a store in connection with premises for the manufacture of fish meal in Palmerston Road. This application was refused on the ground that complaints had been frequently received regarding the business, and that it was inexpedient to sanction the proposed enlargement.

Slaughter-Houses.—During the year, 41,822 cattle were slaughtered in the slaughter-houses within the City, also 61 calves, 50,985 sheep, and 2,978 pigs. The number of whole carcases of cattle seized or destroyed as unfit for human food was 255, of which 201 were seized on account of tuberculosis. The number of part seizures of carcases was 300, of which 231 were for tuberculosis. The number of calves seized, in whole or in part, was 42; of sheep, 34; and of pigs, 32. Of the carcases of pigs seized in whole or in part, 12 were suffering from tuberculosis. In addition to the seizures in the slaughter-houses, 24 whole carcases and 69 part carcases of cattle were seized in the meat marts, as were also 62 whole or part carcases of sheep, 9 of pigs, and 11 of calves.

The quantity of fish seized during the year was upwards of 4 tons, as against 12 tons in the preceding year. The amount of fish landed in Aberdeen was 40,253 tons, as compared with 152,000 in the preceding year and 113,000 in 1913.

PIG-STYES.

In consequence of a circular letter from the Local Government Board in November, recommending Local Authorities to consider such amendments of their Bye-laws for Pig-styes as might reduce during the War the considerable restrictions contained in the bye-laws and thus to encourage the rearing and feeding of pigs as a valuable source of food, the Town Council, without rescinding their existing bye-laws, obtained the approval of the Board for certain Additional Bye-laws. Under these Additional Bye-laws, the Town Council has taken power during the period of the War and one year thereafter to modify or suspend the application of the existing bye-laws in so far as relating to the situation and construction of pig-styes, and to determine, in the case of any pig-stye erected or occupied under such relaxation of the bye-laws, the period during which the pig-stye may continue to be occupied, provided that in no case shall the period extend beyond six years after the conclusion of the War. A considerable number of applications for licence for pig-styes under the new conditions have since been received.

HOUSING.

Owing to the whole of the nuisance inspecting staff, except one, having undertaken military service soon after the beginning of the War, and to their places having been only partly filled, the inspection of housing was necessarily limited during the year to the more clamant needs. The survey of the houses from which cases of tuberculosis had been notified was not, however, intermitted. Of such houses, 1,067 were surveyed, and obvious defects made good, so far as possible. The special survey of houses in the poorer parts of the City, which had been actively going on during the preceding years, was not pushed to the same extent as formerly; but seven dwelling-houses in Shuttle Lane and Skene Row were condemned by the Town Council under the Local Acts on a report from the Sanitary Inspector and myself. No houses were demolished by order of the Town Council, but the demolition of several uninhabitable houses was undertaken by the owners on a request from myself, or on the initiative of the owners themselves. Of undersized houses, 11 were closed during the year. No underground houses were closed. As to overcrowding, 86 cases were discovered and dealt with.

Generally speaking, it has been the aim of the Sanitary Inspector and myself since the War began to abate nothing in respect of keeping the City in good condition as regards state of drainage and cleanliness of houses and curtilage, but to avoid, unless clearly necessary, putting owners to any considerable expense in making substantial structural alterations.

CITY HOSPITAL.

The admissions to the City Hospital in the course of the year are shown in the accompanying table. The total admissions amounted to 2,442, as compared with 2,794 in the preceding year, and an average of 1,481 for the preceding ten years.

The daily number of patients under treatment throughout the year varied from 163 to 387, the average daily number being 270. In the preceding year, the daily number ran from 153 to 383, the average daily number being 274.

Scarlet Fever.—The number of cases of scarlet fever admitted was 1,267, and represented 68 per cent. of all the notified cases. This is the largest number admitted in any year since the City Hospital was opened. There were 94 deaths, giving the high case-mortality of 7·4 per cent., as against an average of 2·3 for the preceding ten years. The type of the disease was unusually severe. The case-mortality has steadily risen during the past two years from 2·6 per cent. in 1913 to 5·0 per cent. in 1914, and, as just mentioned, 7·4 per cent. in 1915.

Diphtheria.—This disease provided the next largest number of admissions, with 618, but the number was considerably under the figure (1,473) for the preceding year, and still lower than in 1913, when it was 1,911. All these figures are unusually high. The number of deaths during the year was 40, equivalent to a case-mortality of 6·5 per cent., which is lower than in the preceding year, and is slightly less than the average for the preceding ten years.

Typhoid Fever gave 12 admissions, with one death, including one case in which both typhoid and paratyphoid (B) organisms were found.

Paratyphoid Fever.—One case of paratyphoid (B) was admitted.

Measles.—There were 58 cases admitted, of which 8 died.

Tuberculosis.—During the year, 275 cases of tuberculosis were admitted, as against 201 in the preceding year and 174 in 1913. The increase in admissions is mainly accounted for by the transference in May, 1915, to the City Hospital of all the patients in the tuberculosis wards of the Parish Council's hospital, when that hospital was taken over by the Military Authorities.

Of the 275 cases of tuberculosis admitted during the year, all were cases of pulmonary tuberculosis, except 18. These cases of other forms of tuberculosis consisted of 12 cases of tubercle of bones and joints, 2 cases of tuberculous meningitis, 2 cases of abdominal tuberculosis, 1 case of tuberculous glands, and 1 case of tubercular abscesses of arm and leg.

Of the 257 pulmonary cases, 122 were of females and 135 of males; and, of the other cases, 11 were females and 7 were males.

Of the total cases of tuberculosis admitted to the City Hospital, 109 (82 males and 27 females) were insured under the National Insurance Act. In addition to

ABERDEEN.—CITY HOSPITAL.—ANNUAL SUMMARY, 1915.

Zymotic Admissions and Deaths during each Year from 1905 to 1915 inclusive.

Disease.		1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1905-1914.	
													Total	Annual Average
Small Pox,	Admitted, ...	0	6	0	0	0	0	0	0	1	0	0	7	0·7
	Died, ...	0	1	0	0	0	0	0	0	0	0	0	1	0·1
	Percent. of Deaths to Admissions, ...	0	*16·7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	...	14·3
Scarlet Fever, ...	Admitted, ..	1267	1040	836	883	1025	613	871	1005	448	140	185	7046	704·6
	Died, ...	94	52	22	26	19	7	7	15	4	5	7	164	16·4
	Percent. of Deaths to Admissions, ...	7·4	*5·0*	*2·6*	*2·9*	*1·9*	*1·1*	*0·8*	*1·5*	*0·9*	*3·6*	*3·8*	...	2·3
Diphtheria,	Admitted, ...	618	1473	1911	727	318	272	244	239	174	192	127	5677	567·7
	Died, ...	40	117	105	27	17	32	22	15	14	17	7	373	37·3
	Percent. of Deaths to Admissions, ...	6·5	*7·9*	*5·5*	*3·7*	*5·3*	*11·8*	*9·0*	*6·3*	*8·0*	*8·9*	*5·5*	...	6·6
Typhoid Fever (including Para-Typhoid),	Admitted, ...	*13	12	27	103	33	16	28	10	17	9	13	268	26·8
	Died, ...	1	2	6	10	3	2	2	0	4	0	3	32	3·2
	Percent. of Deaths to Admissions, ...	7·7	*16·7*	*22·2*	*9·7*	*9·1*	*12·5*	*7·1*	*0*	*23·5*	*0*	*23·1*	...	11·9
Typhus Fever, ...	Admitted, ...	0	0	0	0	3	0	0	0	0	0	97	100	10·0
	Died, ...	0	0	0	0	0	0	0	0	0	0	12	12	1·2
	Percent. of Deaths to Admissions, ...	0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*12·4*	...	12·0
Measles, ...	Admitted, ...	58	1	75	17	86	4	7	36	30	50	6	312	31·2
	Died, ...	8	0	18	12	4	0	1	1	11	3	0	50	5·0
	Percent. of Deaths to Admissions, ...	13·8	*0*	*24·0*	*70·6*	*4·7*	*0*	*14·3*	*2·8*	*36·7*	*6·0*	*0*	...	16·0
Tuberculosis	Admitted, ...	275	201	174	188	122	0	0	0	0	0	0	685	171·3
	Died, ...	43	28	31	17	9	0	0	0	0	0	0	85	21·3
	Percent. of Deaths to Admissions, ...	15·3	*13·9*	*17·8*	*9·0*	*7·4*	*0*	*0*	*0*	*0*	*0*	*0*	...	12·4
Other Cases,	Admitted, ..	211	61	27	73	49	70	63	56	64	54	193	710	71·0
	Died, ...	14	6	6	12	6	9	14	10	14	6	8	91	9·1
	Percent. of Deaths to Admissions, ...	6·6	*9·8*	*22·2*	*16·4*	*12·2*	*12·9*	*22·2*	*17·7*	*21·9*	*11·1*	*4·1*	...	12·8
Total Cases,	Admitted, ...	2442	2794	3050	1991	1636	975	1213	1346	734	445	621	14805	1480·5
	Died, ...	199	206	188	104	58	50	46	41	47	31	37	808	80·8
	Percent. of Deaths to Admissions, ..	8·1	*7·4*	*6·2*	*5·2*	*3·5*	*5·1*	*3·8*	*3·0*	*6·4*	*7·0*	*6·0*	...	5·5

* Including 1 of para-typhoid, and 1 of typhoid plus para-typhoid.

ABERDEEN CITY HOSPITAL.—CASES OF PULMONARY TUBERCULOSIS DISCHARGED DURING 1915.

ON ADMISSION.							ON DISCHARGE.																
Stage of Disease.	No. of Cases.	Tubercle Bacilli in Sputum.		Tuberculin Treatment.		*Average Stay in Hosp. (Days.)	Weight.				General Health.				Lung Lesion.				Tubercle* Bacilli in Sputum.		Fit for Work		Died in Hosp.
							Gain.		Loss.														
		Abs.	Pres.	No.	Yes.		Cases.	Aver. (lbs.)	Cases.	Aver. (lbs	Much Improved.	Improved.	Stationary.	Worse.*	Much Improved.	Improved.	Stationary.	Worse.*	Abs.	Pres.	Yes.	No.	
I.	34†	34	...	34	...	103	33	*6*	1	*1*	16	18	...	...	...	7	27	...	34	..	33	1	...
				...	...	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	...	...
		...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
				...	...	...	...	...	...	...	...	...	..	...	...	...	...	..	...	...	...	...	...
	Totals	34	...	34	...	103	33	6	1	1	16	18	...	..	...	7	27	...	34	...	33	1	...
II.	36‡	32	...	32	...	157	31	*9*	1	*9*	20	10	2	...	...	14	18	...	32	...	24	8	...
				...	...	...	...	...	..	...	...	...	...	...	...	...	..	...	...	...	...	...	...
		...	4	4	...	109	3	*13*	1	*2*	2	1	1	...	...	1	3	...	2	2	3	1	...
				...	...	...	...	...	...	...	...	...	..	...	...	...	...	..	..	...	...		...
	Totals	32	4	36	...	151	34	9	2	5	22	11	3	...	...	15	21	..	34	2	27	9	...
III.	131	55	...	54	...	75	53	*9*	1	*2*	25	22	5	2	...	4	48	2	54	...	38	14	2
				...	1	214	1	*32*	...	...	1	...	...	...	...	...	1	...	1	...	...	1	...
		...	76	75	...	99	35	*10*	40	...	15	15	9	36	...	10	29	36	5	70	17	25	33
				...	1	109	1	*5*	...	...	...	1	...	...	...	...	1	...	...	1	...	1	...
	Totals	55	76	129	2	90	90	10	41	...	41	38	14	38	...	14	79	38	60	71	55	41	35
ALL STAGES.																							
Grand Totals	201	121	80	199	2	104	157	8	44	...	79	67	17	38	...	36	127	38	128	73	115	51	35

† Including 31 cases under 13 years of age.
‡ Including 19 cases under 13 years of age.

* Includes cases that died.

these, 17 insured persons received indoor institutional treatment in Newhills Sanatorium and 12 in other institutions.

The accompanying table gives an analysis of the cases of pulmonary tuberculosis *discharged* from the City Hospital during the year. They numbered 201, and included 50 cases of children under 13 years of age, 31 of whom were in the first stage of the disease, and 19 were in the second stage.

The results are similar to those shown in the corresponding table in the Report for 1914 (p. 99), and commented on at some length in that Report. The average stay in hospital was less than in 1914, being 104 days, as against 129. The percentage of the patients showing an increase of weight on discharge was 78, the increase averaging 8 pounds; 73 per cent. had improved in general health; 18 per cent. showed an improvement in the lung condition; and about 57 per cent. were considered by the Tuberculosis Officer to be fit for work.

In discussing the effects of tuberculin treatment in the Report for 1914 (p. 102), I gave certain reasons for excluding children under 13 years of age. If patients of these earlier ages are excluded from the figures for 1915, there remain 151 patients, whose average stay in hospital, including those that died, was 93 days. Of these 151 patients, only 13 per cent. were in Stages I. or II. of the disease, or about the same proportion as in the previous two years. The proportion receiving tuberculin treatment was much smaller than in the preceding years, being only 1·3 per cent., as compared with 16 per cent. in 1914 and 46 per cent. in 1913.

As to the results, 72 per cent. showed a gain in weight, the gain averaging 10 pounds. This percentage is slightly less than in 1913 or 1914. In general health, 65 per cent. showed improvement, or slightly fewer than in 1914, but rather more than in 1913. In regard to the lung condition, 15 per cent., or distinctly less than in 1914, but only slightly less than in 1913, showed improvement, while in 60 per cent. the condition was stationary. As to tubercle bacilli in the spit, 52 per cent. had bacilli on admission, and 48 per cent. on discharge or death.

The results for the year were unfavourably affected by the transference, in May, to the City Hospital of all the tuberculosis cases in the Parish Council's Hospital, as many of these cases were in a very advanced stage of the disease. At the same time, as some of the cases were of the chronic fibrosis type, without tubercle bacilli in the sputum, the proportion of sputum-infected cases was lower than usual.

Notwithstanding these disturbing factors and the almost complete abandonment of tuberculin treatment, some of the results differed only slightly from those of the preceding years. This was true of the gain in weight, the improvement in general health, and fitness for work. On the other hand, the results in respect of improvement in lung condition and loss of bacilli in sputum were less satisfactory (see Report for 1914, p. 102), but were not quite easy of comparison. Thus although in 1914, with 16 per cent. of the cases receiving tuberculin, the lung condition had improved in as many as 27 per cent. of the total cases, as against 15 per cent. of improved cases in 1915, the percentage of cases with improved lung condition was only 19 in the year 1913, with 46 per cent. of tuberculin-treated cases. Also as regards the disappearance of bacilli from the sputum, although notably much less in 1915 than in 1913, it was only slightly less than in 1914.

REPORT BY SANITARY INSPECTOR

PROCEEDINGS UNDER THE PUBLIC HEALTH AND OTHER ACTS DURING 1915.

I.—NUISANCES.

	Number.
Complaints received,	976
Intimations served under Section 19,	2,740
Notices served under Section 20,	340
Cases in which Legal Proceedings were taken,	4

II.—WORKSHOPS.

Inspections,	2,103
Notices served under Section 2 (3) of Factory and Workshop Act, 1901,	486
Cases in which Legal Proceedings were taken,	0

III.—TENTS AND VANS.

Inspections,	16

IV.—COMMON LODGING-HOUSES.

On Register at 1st January, 1915 (including Common Lodging-House of Local Authority),	6
Renewals of Registration,	6
On Register at 31st December, 1915,	6
Inspections between 8 a.m. and 10 p.m.,	291
Inspections between 10 p.m. and 8 a.m.,	70
Cases in which Legal Proceedings were taken (Breaches of Bye-laws, &c.),	0

V.—HOUSES LET IN LODGINGS.

On Register at 1st January, 1915,	27
On Register at 31st December, 1915,	29
Inspections,	409
Cases in which Legal Proceedings were taken,	0

VI.—INFECTIOUS DISEASES.

Visits of Inquiry, &c.,	21,036
Patients removed to Hospital,	2,464
Persons removed to Cleansing Station,	633
Intimations to School Boards, Teachers, &c.,	7,886
Houses and Premises disinfected,	5,338
Sets of Clothing, Bedding, &c., disinfected or destroyed,	6,015
Cases in which Legal Proceedings were taken,	0

VII.—BURIALS.

	Number.
Burials undertaken in terms of Section 69 (Public Health Act),	36

VIII.—DAIRIES, COWSHEDS, AND MILKSHOPS.

On Register at 1st January, 1915,	490
Registered during year,	108
Removed from Register,	122
On Register at 31st December, 1915,	476
Inspections,	2,388
Contraventions of Orders or Regulations dealt with,	0

IX.—SLAUGHTER-HOUSES AND OFFENSIVE TRADES.

Applications for sanction to establish,	4
Applications granted,	3
Applications under Section 33 for Licence or Renewal of Licence,	9
Applications granted,	9
Public Slaughter-Houses (if any) belonging to Local Authority,	0
Private Slaughter-Houses,	7
Unlicensed Slaughter-Houses dealt with,	0
Inspections of Slaughter-Houses,	2,447
Inspections of other Offensive Businesses,	1,177
Number of such *other* Offensive Businesses at 31st December, 1915,	45

X.—SALE OF FOOD AND DRUGS ACTS.

Samples procured for Analysis,	*388
Certified to be Genuine,	345
Certified to be Adulterated,	43
Cases in which Legal Proceedings were taken,	37
Cases in which Legal Proceedings were successful,	37

* In addition to above, 21 unofficial samples of sweet milk were taken at byres in connection with cases which were before the Court. Twenty "test" samples were also procured.

XI.—RAG FLOCK ACT.

Samples procured for Analysis,	12
Certified to conform to Board's standard,	12

XII.—BYE-LAWS.

Inspections in carrying out Bye-laws relating to—

(*a*) Pig-styes,	216
(*b*) Public Conveyances,	0
(*c*) Other sanitary matters,.	0

INSPECTIONS OF FOOD.

NUMBER AND PLACE OF INSPECTIONS OF FOOD DURING YEAR 1915.

Fish Market, ...	332	Fleshers' Shops, ...	447
Shipping Sheds, ...	700	Fruiterers' Shops, ...	55
Fish-curing Premises, ...	736	Restaurants, ...	108
Slaughter-houses, ...	2,447	New Market Hall, ...	292
Meat Marts, ...	1,208	Street Markets, ...	101
Provision Curing Works, . . .	2,580	Other Premises, ...	1,816
Grocers' Shops, ...	142		
Fishmongers' Shops, ...	45	Total, ...	11,009

UNSOUND FOOD SEIZED OR DESTROYED DURING YEAR 1915.

WEIGHT IN LBS.

1915.	Beef.	Veal.	Mutton.	Pork.	Offal.	Poultry.	Game.	Ham and Bacon.	Tinned Food.	Eggs.	Fruit.	Fish.
January, .	25,740	461	173	290	5,716	...	...	...	267	...	28	...
February, .	22,336	130	137	787	4,566	201	...	28	440	...	.	1,736
March, .	24,190	60	369	616	5,015	33	...	448	256	...	...	1,120
April, . .	24,773	419	770	300	5,509	...	..	...	292	..	...	2,016
May, . .	19,249	756	534	161	4,935	..	98	...	343	...	...	570
June, . .	11,310	255	343	119	2,856	...	11	7	929	...	...	1,064
July, . .	12,943	568	264	364	3,239	9	...	...	374	45	...	..
August, .	9,497	632	189	220	2,981	281	27	...	1,765	...	...	1,470
September,	6,407	214	352	489	1,238	118	21	...	493	...	824	616
October, .	8,483	156	172	32	2,082	104	4	...	422	...	...	980
November,	15,933	60	69	50	4,152	142	...	...	1,114	...	...	56
December,	23,608	...	139	365	4,726	171	..	...	114	...	...	56
Total Lbs.,	204,469	3,711	3,511	3,793	47,015	1,059	161	483	6,809	45	852	9,684

FOOD INSPECTIONS.—SUMMARY FOR YEARS 1905 to 1915.

	1905.	1906.	1907.	1908.	1909.	1910.	*1911.	1912.	1913.	1914.	1915.
Number of Inspections, .	5,974	6,110	6,147	5,659	5,808	6,305	10,019	9,759	9,750	10,245	11,009
Number of Seizures, .	427	475	443	483	592	633	813	784	730	908	1,099
Weight of Food Seized (Tons), ...	75	68	90	84	164	109	128	121	123	142	125
Number of Cases dealt with by Magistrates,	1	1	1	4	3	...	1	4	...	2	5
Legal Proceedings instituted,	1	1	1	4	1	...	1	4	...	1	3
Fines Imposed, . . .	£1	£5	£1	£30	£5	...	£6	£15	...	£5	£22 7s.

* Additional Inspector appointed.

CAUSES OF SEIZURE OF UNSOUND FOOD.

A.—Carcases.

Disease.	Cattle.		Sheep.		Swine.		Total.		
	Entire Carcase	Part Carcase	Entire Carcase	Part Carcase	Entire Carcase	Part Carcase	Entire Carcase	Part Carcase	Weight in lbs.
Tuberculosis,	209	238	...	...	11	5	220	243	194,274
Septicaemia,	...	...	19	...	...	...	19	...	858
Anthrax,	...	...	...	...	...	...	...	...	...
Metritis,	4	...	...	...	...	...	4	..	2,648
Actinomycosis,	...	7	...	...	...	...	...	7	159
Inflammatory Diseases,	42	42	13	3	7	1	62	46	27,020
Parasitical Diseases,	...	8	...	...	...	...	...	8	733
Suffocation,	16	...	9	...	8	...	33	...	8,865
Emaciation,	3	...	22	...	2	...	27	...	2,003
Fractures and Bruising,	2	80	5	6	...	10	7	96	8,594
Dropsy,	8	...	1	...	..	...	9	...	4.309
Immaturity,	26	...	...	...	...	...	26	...	1,718
Decomposition,	1	13	19	3	3	1	23	17	2,522
Other Causes,	16	1	...	...	1	...	17	1	8,796
Totals,	327	389	88	12	32	17	447	418	262,499

B.—Other Articles of Food.

Articles.	Where Seized.	Lots and Weights.		Reason for Seizure.
			lbs.	
Fish,	Fish Market,	(22 lots)	6,916	Decomposition.
Do.,	Curing Works,	(7 ,,)	2,768	Do.
Poultry,	Do.,	(16 ,,)	582	Do.
Do.,	Cold Stores,	(6 ,,)	409	Do.
Do.,	Meat Marts,	(3 ,,)	53	Do.
Do.,	Butchers' Shops,	(2 ,,)	15	Do.
Rabbits,	Cold Stores,	(2 ,,)	99	Do.
Do.,	Meat Marts,	(3 ,,)	35	Do.
Hares,	Meat Mart,	(1 ,,)	27	Do.
Polonies,	Curing Works,	(1 ,,)	448	Do.
Bacon and Ham,	Warehouses,	(2 ,,)	35	Do.
Fruit,	Do.,	(3 ,,)	852	Do.
Tinned Foods,	Grocers' Shops, Warehouses, and Curing Works,	(165 ,,)	6,811	Do.
Eggs,	Street,	(1 ,,)	45	Do.
Total Weight,			19,096	

SALE OF FOOD AND DRUGS ACTS.

Samples taken by Sanitary Inspector during Year 1915, and Results of Analysis by Public Analyst.

	No. of Samples Taken Officially.			No. of Samples Taken Informally.			Total Samples Taken.
	Pure.	Adulterated.		Pure.	Adulterated.		
Milk and its products; and substitutes—		No.	Per cent.		No.	Per cent.	
Milk,	175	33	16	0	0	0	208
Skimmed Milk,	25	0	0	0	0	0	25
Butter,	53	5	9	2	0	0	60
Margarine,	14	3	18	2	2	50	21
Cheese,	0	0	0	4	0	0	4
Other Foods, including Confections—							
Flour,	0	0	0	2	0	0	2
Syrup,	0	0	0	1	0	0	1
Dripping,	16	0	0	0	0	0	16
Confections,	12	0	0	0	0	0	12
Marmalade,	0	0	0	2	0	0	2
Mixed Fruit Jam,	0	0	0	1	0	0	1
Raspberry Jam,	0	0	0	1	0	0	1
Strawberry Jam,	0	0	0	1	0	0	1
Beverages—							
Aerated Waters,	13	0	0	0	0	0	13
Tea,	0	0	0	1	0	0	1
Coffee,	9	0	0	0	1	100	10
Whisky,	10	0	0	0	0	0	10
Rum,	6	2	25	0	0	0	8
Drugs—							
Boric Acid,	4	0	0	0	0	0	4
Gregory's Powder,	2	0	0	0	0	0	2
Tincture of Iodine,	3	0	0	0	0	0	3
Aromatic Spirit of Ammonia,	3	0	0	0	0	0	3
Totals,	345	43	11	17	3	15	408

PROCEEDINGS FOR CONTRAVENTIONS OF STATUTES IN YEAR 1915.

Date.	Court.	Act.	Offence.	Penalty or Decision.
1915.				
Jan. 15	Police	Aberdeen Police Act, 1862 .	Permitting choked drain to continue	Penalty, 10s.
,, 29	Do.	Bye-laws for Slaughter-houses	Removing diseased carcase from Slaughter-house without consent of Med. Off. of Health or San. Inspector	Penalty, £2.
,, 29	Sheriff	Food and Drugs Acts, . .	Selling milk containing not more than 2·76 p.c. fat and and 8·14 p.c. solids other than fat	Case withdrawn, as milk supplied to accused found to be under standard.
Feb. 5	Do.	Do. . .	Selling milk containing not more than 2·41 p.c. fat .	Penalty, £1 1s.
,, 5	Do.	Do. . .	Selling milk containing not more than 2·86 p.c. fat .	Penalty, £1 1s.
,, 19	Do.	Do. . .	Refusing to sell milk to Sanitary Inspector . .	Penalty, £1.
,, 25	Do.	Do. . .	Supplying three lots of milk each deficient in either fat or solids other than fat	Penalty, £3.
Mar. 4	Do.	Do. . .	Selling butter containing not less than 24·3 p.c. water	Penalty, 10s.
,, 4	Do.	Do. . .	Selling butter containing not less than 23·8 p.c. water	Penalty, 10s.
,, 4	Do.	Do. . .	Selling butter containing not less than 23·9 p.c. water	Penalty, 10s.
,, 4	Do.	Do. . .	Selling butter containing not less than 18·8 p.c. water	Penalty, 2s. 6d.
,, 12	Do.	Do. . .	Selling milk containing not more than 2·88 p.c. fat .	Penalty, 10s. 6d.
,, 12	Do.	Do. . .	Selling milk containing not more than 2·62 p.c. fat .	Case withdrawn, as milk supplied to accused found to be under standard.
,, 19	Do.	Do. . .	Selling milk containing not more than 2·84 p.c. fat .	Penalty, £3 3s.
,, 20	Police	Public Health (Scot.) Act, .	Consigning carcase of sow unfit for human food . .	Warrant granted for destruction.
,, 22	Sheriff	Food and Drugs Acts, . .	Supplying milk containing not more than 2·58 p.c. fat	Case withdrawn, as milk from cows found to be under standard.
,, 25	Do.	Shops Act and Aberdeen Orders	Selling cheese on evening of weekly half-holiday .	Penalty, 10s.
,, 25	Do.	Do. do.	Selling pork chops after specified closing hours . .	Penalty, 10s.
April 1	Do.	Food and Drugs Acts, . .	Supplying milk containing not more than 2·36 p.c. fat	Penalty, £2.
,, 1	Do.	Do. . .	Supplying three lots of milk each deficient in either fat or solids other than fat	Penalty, £1.
,, 7	Do.	Do. . .	Selling milk containing not more than 8·18 p.c. solids other than fat	Case withdrawn, as milk supplied to accused found to be under standard.
,, 7	Do.	Do. . .	Selling milk containing not more than 2·52 p.c. fat .	Penalty, £1.
,, 27	Do.	Do. . .	Supplying milk containing not more than 2·82 p.c. fat and 7·31 p.c. solids other than fat	Penalty, £3.
May 27	Do.	Do. . .	Selling milk containing not more than 2·54 p.c. fat .	Penalty, £5.
,, 27	Do.	Do. . .	Selling milk containing not more than 1·98 p.c. fat .	Penalty, £1.
,, 27	Do.	Do. . .	Selling rum 5·01 deg. above 25 deg. under proof .	Penalty, £2.
,, 27	Do.	Do. . .	Selling whisky 8·45 deg. above 25 deg. under proof .	Penalty, £3 : or 20 days' imprisonment.
June 11	Police	Public Health (Scot.) Act, .	Exposing for sale minced meat unfit for human food	Penalty, £7 7s. ; or 30 days' imprisonment.
,, 15	Sheriff	Food and Drugs Acts, . .	Selling milk containing not more than 2·85 p.c. fat .	Case withdrawn, as milk from cows found to be under standard.

PROCEEDINGS FOR CONTRAVENTIONS OF STATUTES—*continued.*

Date.	Court	Act.	Offence.	Penalty or Decision.
1915. June 15	Sheriff	Food and Drugs Acts,	Selling milk containing not more than 2·58 p.c. fat	Penalty, £5.
,, 23	Police	Bye-laws for Slaughter-houses	Stripping lining membrane off diseased carcase, and removing carcase from slaughter-house without consent of Med. Officer of Health or San. Inspector	Penalty, £2.
July 1	Sheriff	Food and Drugs Acts,	Selling milk containing not more than 2·07 p.c. fat	Penalty, £1.
,, 15	Police	Public Health (Scot.) Act,	Three hawkers charged with selling large quantity of eggs unfit for human food	One fined £5; or 30 days' imprisonment.
,, 24	Sheriff	Food and Drugs Acts,	Selling milk containing not more than 2·64 p.c. fat	Penalty, £4.
,, 27	Police	Bye-laws for Slaughter-houses	Two slaughterers failing to keep fittings of slaughter-booth and slaughtering implements clean	Each fined £3; or 30 days' imprisonment.
,, 27	Do.	Do. do.	Do. do. do.	Each fined £2; or 20 days' imprisonment.
,, 30	Do.	Public Health (Scot.) Act,	Seven tenants failing to keep w.c.'s clean	Each fined 10s.; or 5 days' imprisonment.
Aug. 5	Sheriff	Food and Drugs Acts,	Supplying milk containing not more than 2·41 p.c. fat	Penalty, £2.
,, 10	Police	Public Health (Scot.) Act,	Wholesale merchant selling aforesaid eggs to hawkers	Penalty, £10; or 60 days' imprisonment.
,, 17	Sheriff	Food and Drugs Acts,	Selling milk containing not more than 2·60 p.c. fat	Penalty, £3.
,, 26	Do.	Do.	Selling milk containing not more than 2·45 p.c. fat	Penalty, £1.
,, 30	Police	Public Health (Scot.) Act,	Consigning fowls unfit for human food	Warrant granted for destruction.
Sept. 15	Sheriff	Food and Drugs Acts,	Supplying milk containing not more than 2·76 p.c. fat	Penalty, £5 5s.
,, 16	Do.	Do.	Selling butter containing not less than 24·5 p.c. water	Penalty, £1.
Oct. 26	Do.	Do.	Supplying milk containing not more than 2·51 p.c. fat	Penalty, £5.
Nov. 30	Police	Public Health (Scot.) Act,	Keeping dwelling-house in filthy condition	Penalty, £1; or 10 days' imprisonment.
,, 30	Sheriff	Food and Drugs Acts,	Selling margarine containing not less than 17·6 p.c. water	Accused produced a warranty, and case withdrawn.
,, 30	Do.	Do.	Selling margarine containing not less than 17·0 p.c. water	Do. do.
,, 30	Do.	Do.	Selling margarine containing not less than 16·8 p.c. water	Case withdrawn.
Dec. 1	Do.	Do.	Giving a false warranty	Penalty, £3 3s.
,, 1	Do.	Do.	Do.	Penalty, £3 3s.
,, 10	Police	Public Health (Scot.) Act,	Six tenants failing to keep w.c.'s clean	Four tenants each fined 5s.; or 5 days' imprisonment.
1916. Jan. 6	Sheriff	Food and Drugs Acts,	Supplying milk containing not more than 8·40 p.c. solids other than fat	Penalty, £10.
,, 6	Do.	Do.	Selling milk containing not more than 2·49 p.c. fat	Penalty, £5.
,, 10	Do.	Shops Act,	Failing to close shop on one afternoon of week	Penalty, 5s.; with £1 0s. 6d. of expenses.
,, 20	Do.	Food and Drugs Acts.	Selling milk containing not more than 2·77 p.c. fat	Penalty, £1.

JAMES CUMMING, *Sanitary Inspector.*